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PROJECT

Contemporary

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Examination of

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REPORT

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CENTERS
Direct Air Support in I CORPS

July 1965 — June 1969

31 AUGUST 1969

HQ PACAF

**Directorate, Tactical Evaluation
CHECO Division**

Prepared by:

**Capt Kenneth J. Alnwick
Project CHECO 7th AF, DOAC**

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DOTEC-69-42

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14. ABSTRACT <p>Project CHECO was established in 1962 to document and analyze air operations in Southeast Asia. Over the years the meaning of the acronym changed several times to reflect the escalation of operations: Current Historical Evaluation of Counterinsurgency Operations, Contemporary Historical Evaluation of Combat Operations and Contemporary Historical Examination of Current Operations. Project CHECO and other U. S. Air Force Historical study programs provided the Air Force with timely and lasting corporate insights into operational, conceptual and doctrinal lessons from the war in SEA.</p>					
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REPLY TO
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SUBJECT

Changes to Project CHECO Report, "Direct Air Support in I Corps"

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It is requested that all holders of subject report, (S), 31 August 1969, DOTEC-69-42, make the following changes in pen and ink.

<u>Page</u>	<u>Paragraph</u>	<u>Line</u>	<u>Action to be Taken</u>
Cover Page	Title		After "Support", insert "Centers".
Title Page	Title		After "Support", insert "Centers".
iii		Subject	After "Support", insert "Centers".
x	2	1	After "Support", insert "Centers".
2	3	8	Delete "direct", insert "tactical".
20	1	6	Delete "direct", insert "tactical".
40	1	4	Delete "direct", insert "tactical".
64	3	3	Change "direct air support systems" to "Tactical Air Control Systems".
71	3	1	Change "direct air support system" to "Tactical Air Control System".
72	3	1	Change "direct air support system" to "Tactical Air Control System".
73	2	3	Change "direct air support system" to "Tactical Air Control System".
75	1	4	Delete "direct", insert "tactical".

FOR THE COMMANDER IN CHIEF

Warren H. Peterson
WARREN H. PETERSON, Colonel, USAF
Chief, CHECO Division
Directorate, Tactical Evaluation
DCS/Operations

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PROJECT CHECO REPORTS

The counterinsurgency and unconventional warfare environment of Southeast Asia has resulted in the employment of USAF airpower to meet a multitude of requirements. The varied applications of airpower have involved the full spectrum of USAF aerospace vehicles, support equipment, and manpower. As a result, there has been an accumulation of operational data and experiences that, as a priority, must be collected, documented, and analyzed as to current and future impact upon USAF policies, concepts, and doctrine.

Fortunately, the value of collecting and documenting our SEA experiences was recognized at an early date. In 1962, Hq USAF directed CINCPACAF to establish an activity that would be primarily responsive to Air Staff requirements and direction, and would provide timely and analytical studies of USAF combat operations in SEA.

Project CHECO, an acronym for Contemporary Historical Examination of Current Operations, was established to meet this Air Staff requirement. Managed by Hq PACAF, with elements at Hq 7AF and 7AF/13AF, Project CHECO provides a scholarly, "on-going" historical examination, documentation, and reporting on USAF policies, concepts, and doctrine in PACOM. This CHECO report is part of the overall documentation and examination which is being accomplished. Along with the other CHECO publications, this is an authentic source for an assessment of the effectiveness of USAF airpower in PACOM.



MILTON B. ADAMS, Major General, USAF
Chief of Staff

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- (14) AFXOXY 1
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a. TAC

(1) HEADQUARTERS

(a) DO. 1
 (b) DPL. 2
 (c) DOCC. 1
 (d) DORQ. 1
 (e) DIO. 1

(2) AIR FORCES

(a) 12AF
 1. DORF. 1
 2. DI. 1
 (b) 19AF(DI). 1
 (c) USAFSOF(DO). 1

(3) AIR DIVISIONS

(a) 831AD(DO). 1
 (b) 832AD(DO). 2
 (c) 833AD(DDO). 1
 (d) 835AD(DO). 1
 (e) 836AD(DO). 2
 (f) 838AD
 1. DO. 1

(g) 839AD(DO). 2

(4) WINGS

(a) 1SOW(DO). 1
 (b) 4TFW(DO). 1
 (c) 23TFW(DOI). 1
 (d) 27TFW(DOP). 1
 (e) 33TFW(DOI). 1
 (f) 64TFW(DO). 1
 (g) 67TRW(C). 1
 (h) 75TRW(DO). 1
 (i) 316TAW(DOP). 1
 (j) 317TAW(EX). 1
 (k) 363TRW(DOC). 1
 (l) 464TAW(DO). 1
 (m) 474TFW(TFOX). 1
 (n) 479TFW(DOF). 1
 (o) 516TAW(DOPL). 1
 (p) 441OCCTW(DOTR). 1
 (q) 451OCCTW(DO16-I). 1
 (r) 4554CCTW(DOI). 1

(5) TAC CENTERS, SCHOOLS

(a) USAFTAWC(DA). 2
 (b) USAFTARC(DID). 2
 (c) USAFTALC(DCRL). 1
 (d) USAFTFWC(CRCD). 1
 (e) USAFSOC(DO). 1
 (f) USAFAGOS(DAB-C). 1

b. SAC

(1) HEADQUARTERS

(a) DOPL. 1
 (b) DPLF. 1
 (c) DM. 1
 (d) DI. 1
 (e) OA. 1
 (f) HI. 1

(2) AIR FORCES

(a) 2AF(DICS). 1
 (b) 8AF(C). 1
 (c) 15AF(DOA). 1

(3) AIR DIVISIONS

(a) 3AD(DO). 3

c. MAC

(1) HEADQUARTERS

(a) MAOID. 1
 (b) MAOCO. 1
 (c) MAFOI. 1
 (d) MACOA. 1

(2) AIR FORCES

(a) 21AF(OCXI). 1
 (b) 22AF(OCXI). 1

(3) AIR DIVISIONS

(a) 322AD(DO). 1

(4) WINGS

(a) 61MAWg
 1. ODC. 1
 2. OIN. 1
 (b) 62MAWg(OCXP). 1
 (c) 436MAWg(OCXC). 1

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(d) 437MAWg(OCXI) 2
 (e) 438MAWg(OCXC) 1
 (f) 445MAWg
 1. OC 1
 2. WDO-PLI 1

(5) MAC SERVICES
 (a) AWS(AWXW) 1
 (b) ARRS(ARXLR) 1
 (c) ACGS(AGOV) 1
 (d) AAVS(AVODOD) 1

d. ADC

(1) HEADQUARTERS
 (a) ADODC 1
 (b) ADOOP 1
 (c) ADLCC 1

 (2) AIR FORCES
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 (b) 10AF
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 (c) AF ICELAND(FICAS) . . . 2

 (3) AIR DIVISIONS
 (a) 25AD(ODC) 2
 (b) 29AD(ODC) 1
 (c) 31AD(ODC-A) 2
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 (f) 35AD(CCR) 1
 (g) 37AD(ODC) 1

e. ATC

(1) HEADQUARTERS
 (a) ATXDC 1

f. AFLC

(1) HEADQUARTERS
 (a) MCVSS 1
 (b) MCOO. 1

g. AFSC

(1) HEADQUARTERS
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 (b) SCS-6 1
 (c) SCGCH 2
 (d) SCTPL 1
 (e) ASD/ASJT. 1
 (f) ESD/ESO 1
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h. USAFSS

(1) HEADQUARTERS
 (a) ODC 1
 (b) CHO 1

 (2) SUBORDINATE UNITS
 (a) Eur Scty Rgn(OPD-P) . . . 1
 (b) 6940 Scty Wg(OOD) 1

i. AAC

(1) HEADQUARTERS
 (a) ALDOC-A 2

j. USAFSO

(1) HEADQUARTERS
 (a) COH 1

k. PACAF

(1) HEADQUARTERS
 (a) DP 1
 (b) DI 1
 (c) DO 1
 (d) DPL 4
 (e) CSH 1
 (f) DOTECH 5
 (g) DE 1
 (h) DM 1
 (i) DOTECH. 1

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- (2) AIR FORCES
- (a) 5AF(DOPP) 1
 - 1. Det 8, ASD(DOASD) 1
 - (b) 7AF
 - 1. DO 1
 - 2. DIXA 1
 - 3. DPL 1
 - 4. TACC 1
 - 5. DOAC 2
 - (c) 13AF
 - 1. DXIH 1
 - 2. DPL 1
 - (d) 7AF/13AF(CHECO) 1

1

- (3) AIR DIVISIONS
- (a) 313AD(DOI) 1
 - (b) 314AD(DOP) 2
 - (c) 327AD
 - 1. DO 1
 - 2. DI 1
 - (d) 834AD(DO) 2

- (4) WINGS
- (a) 8TFW(DCOA) 1
 - (b) 12TFW(DCOI) 1
 - (c) 35TFW(DCOI) 1
 - (d) 37TFW(DCOI) 1
 - (e) 56SOW(TVOC) 1
 - (f) 347TFW(DCOOT) 1
 - (g) 355TFW(DCOC) 1
 - (h) 366TFW(DCO) 1
 - (i) 388TFW(DCO) 1
 - (j) 405FW(DCOA) 1
 - (k) 432TRW(DCOI) 1
 - (l) 460TRW(DCOI) 1
 - (m) 475TFW(DCO) 1
 - (n) 633SOW(DCOI) 1
 - (o) 6400 Test Sq(A) 1

- (5) OTHER UNITS
- (a) Task Force Alpha(DXI) 1
 - (b) 504TASG(DO) 1

- m. USAFE
- (1) HEADQUARTERS
 - (a) ODC/OA 1
 - (b) ODC/OTA 1
 - (c) OOT 1
 - (d) XDC 1

- (2) AIR FORCES
 - (a) 3AF(ODC) 2
 - (b) 16AF(ODC) 2
 - (c) 17AF
 - 1. ODC 1
 - 2. OID 1

- (3) WINGS
 - (a) 20TFW(CACC) 1
 - (b) 36TFW(DCOID) 1
 - (c) 50TFW(DCO) 1
 - (d) 66TRW(DCOIN-T) 1
 - (e) 81TFW(DCO) 1
 - (f) 401TFW(DCOI) 1
 - (g) 513TAW(OID) 1
 - (h) 601TCG(CAACC) 1
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FOREWORD

The system for control of tactical air assets in I Corps was an amalgam of the VNAF, USAF, and USMC tactical air control systems. These elements were brought together with the inception of the Single Management Concept on 10 March 1968. Prior to this date, the USAF and VNAF had run parallel systems from a joint Direct Air Support Center (DASC) at I Corps Headquarters in Da Nang, while the USMC had run an independent operation from their Tactical Air Direction Center (TADC) at the 1st Marine Air Wing (1 MAW) Headquarters compound on Da Nang Air Base. As the locations and strengths of U.S. Army and USMC forces shifted and changed throughout I Corps, the concept of Marines working only for Marines could not be sensibly justified within the integrated command structure that developed in I Corps. The need for Single Management became patently obvious after Tet and the siege of Khe Sanh during the winter of 1967 and spring of 1968. This report traces the development of the tactical air control system from the small Air Support Operations Center of 1962 to the complex structure that existed in December 1968.

"Direct Air Support ^{centers} in I Corps - July 1965-June 1969" is one of several CHECO reports about the tactical air control systems in each of the four corps areas of South Vietnam. This report emphasizes the relationship among the many agencies involved with the command and

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control of air assets in I Corps. A detailed monthly analysis of response times has proved to be impossible, because of the lack of a meaningful and accurate data base for I Corps. (For an analysis of the data problem, see the CHECO report, "Air Response to Immediate Air Requests in SVN." However, the long-accepted guideline of approximately 40 minutes for scrambles and 20 minutes for divers appears to have held up well in I Corps. Army commanders have been unstinting in their praise of the support they received. The Marine commanders appear less satisfied. Nevertheless, the FACs in I Corps knew that in an emergency, they could expect air support both in time (20 minutes) and in quantities sufficient to handle the situation.

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CHAPTER I
INTRODUCTION

The story of the I Corps Direct Air Support Centers (DASC) properly begins with the creation of a Tactical Air Control System in South Vietnam on 2 January 1962. The initial system was patterned along lines developed by the Air Ground Operations School at Keesler AFB, Miss. This system was established to support the USAF "Farmgate" units of B-26s and T-28s which were deployed to South Vietnam that same year. The DASC at that time was called the I Corps Air Support Operations Center (I ASOC) and was jointly manned by Vietnamese Air Force (VNAF) personnel and their USAF advisers. Since its inception, I ASOC/I DASC has been located at the I Corps Headquarters just outside of Da Nang Air Base. In July 1963, twenty-two O-1Es were deployed to South Vietnam and assigned to the 19th Tactical Air Support Squadron (TASS). These aircraft were flown primarily in the Bien Hoa area of III Corps.

Average reaction times were quite slow, with an average of about one hour and forty minutes elapsed time between the time the ground Commander initiated the request until strike aircraft arrived over the target. At this time, very few B-26s and T-28s were available, and it was difficult to maintain aircraft on alert to scramble in response to immediate requests. Response times were somewhat improved by the addition of Tactical Air Control Parties (TACPs) to the system in June 1964. Also, in early 1964, the old B-26s were phased out and

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replaced with A-1Es. ^{1/} A major change occurred in February 1965 with the introduction of USAF jets into South Vietnam to meet the challenge of increased Viet Cong (VC) activity. ^{2/} The number of Forward Air Controllers (FACs) had increased to only 35 since the inception of the 19th TASS, but these 35 men were supporting about 2,555 sorties per month, and averaging 73 sorties/FAC/month for the first part of the year. By June 1965, the number of FACs had jumped to 95 and 7,908 sorties were flown for an average of 78.5 sorties/FAC/month. ^{3/}

On 15 August 1965, as part of the response to the rapid buildup of USAF forces in SVN, the 2d Air Division Air Operations Center was redesignated as the Tactical Air Control Center (TACC) and the I ASOC became the I Corps Direct Air Support Center (I DASC). ^{4/} This, along with the establishment of the 29th TASS at Da Nang on 6 May 1965, created the framework upon which the DASC system in I Corps was to grow and develop. ^{5/}

On 1 April 1966, the systems for command and control of tactical air forces were consolidated into PACAF OPlan 151-66, Southeast Asia Integrated Tactical Air Control System (SEAITACS). This plan reemphasized the position of the DASC in the tactical air control system. The DASC was charged with the responsibility for the "conduct of tactical air support for friendly ground forces", and it was to provide support elements that host countries could not provide for themselves. The DASC was to be the focal point for ~~direct~~ ^{tactical} air support operations at the

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Army corps level. The DASC was described in PACAF OPlan 151-66 as follows:^{6/}

"The DASC is a mobile, Air Force agency designed to operate with the appropriate ground force Tactical Operations Center. A primary function is to provide fast reaction to ground force requirements for immediate close air support and tactical air reconnaissance missions...."

On 5 June 1967, Air Force Manual 2-7 was published. It codified the Air Force's experience with the Tactical Air Control System (TACS) and provided doctrinal guidance for the TACS. In this manual, the DASC was defined as "a highly mobile, air transportable Air Force TACS element", and was assigned the additional responsibility for tactical airlift support.^{7/} The DASC was charged with the responsibility of providing a fast-reaction capability for ground force requests for close air support. Immediate or emergency requests were to be passed to the TACC which would reallocate sorties or use "emergency resource...retained by the TACC for such exigencies". The DASC was the TACS element primarily concerned with exchange of information, coordination and detailed execution of required tactical air support operations".^{8/}

Although I DASC, and its successor, Horn DASC, fitted this general definition, the introduction of the Single Manager Concept, along with local conditions, created some striking modifications to the system as outlined in AFM 2-7. First, the DASCs were not mobile. They were fixed installations in bunkers and concrete buildings with permanent offices and command operations centers. They were not solely manned by Air

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Force personnel; they were jointly manned by USAF, VNAF, and USMC personnel after 10 August 1968. I DASC, and later Horn DASC, had scramble authority within I Corps and could call directly upon both Marine and Air Force alert pads for scramble aircraft. Add-on sorties from Marine sources were kept in I Corps and not released to the TACC, and diversion of allocated sorties was a large part of the I Corps DASCs daily operation. The phrase "exchange of information, coordination, and detailed execution of required tactical air support operations"^{9/} hardly sufficed to cover the broad range of duties performed by the I DASC personnel. They acquired duties such as: liaison with the Commanding General, III Marine Amphibious Force (CG, III MAF), running an in-country interdiction program, and conducting field tests and evaluations of new Air Force combat techniques and equipment. Finally, there was no airlift function in any USAF DASC in the Republic of Vietnam.

Thus, for I Corps, a more functional definition would have been:

"The I Corps DASC is a semipermanent air support agency designed to operate with the appropriate ground force Tactical Operations Center. A primary function is to provide fast reaction to ground force requirements for immediate close air support and tactical air reconnaissance by exercising its capability to divert or scramble aircraft within its area of responsibility. The I Corps DASC has the overall responsibility for all facets of close air support and divert air support within I Corps to include operational functions such as interdiction programs and weapons evaluation. In addition, the DASC is that element of the TACS that is responsible for liaison and coordinating the detailed execution of tactical air support operations with the ground forces."

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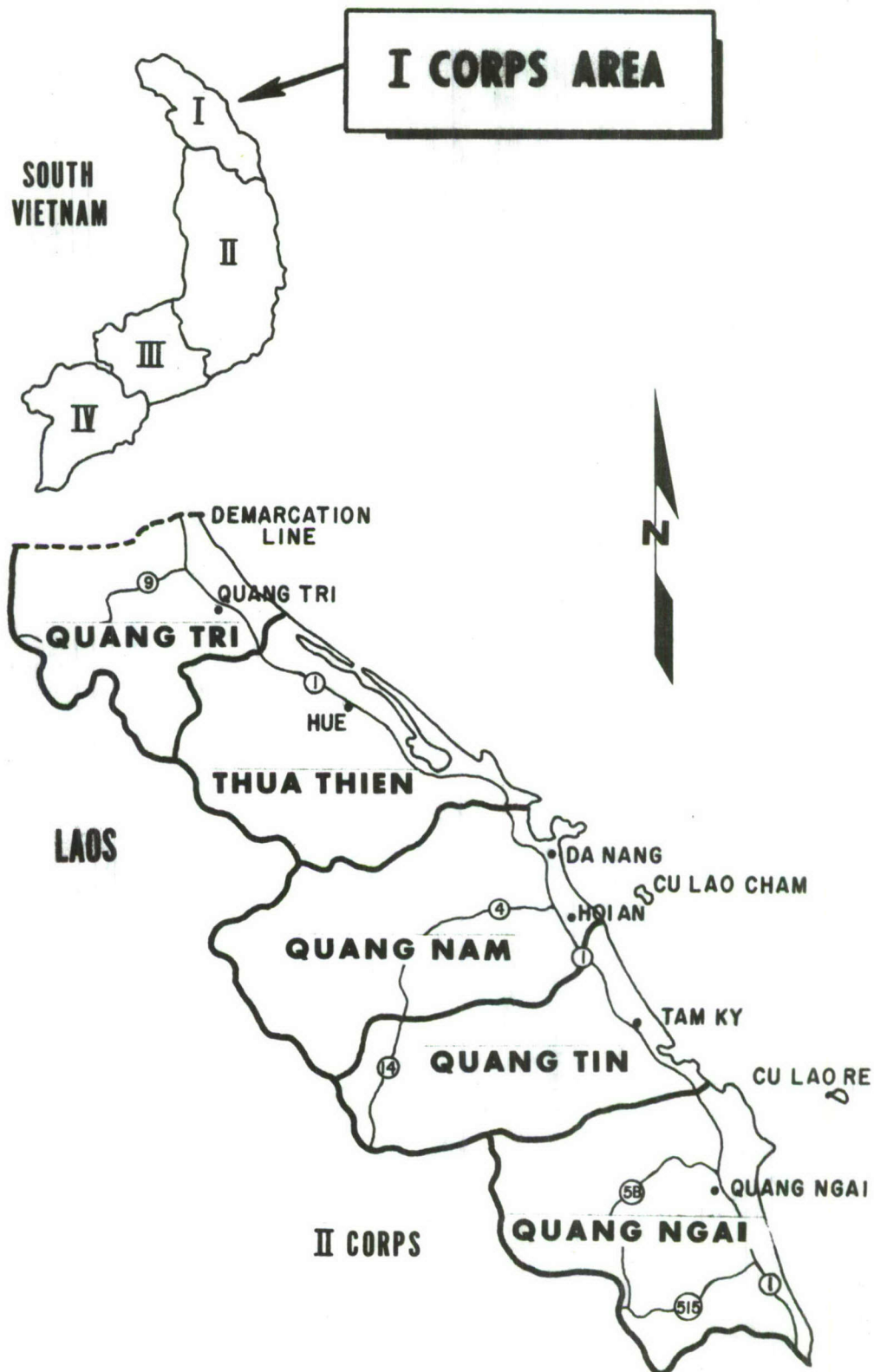


FIGURE 1
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Supporting the DASC in the execution of these functions are Tactical Air Control Parties (TACPs) comprised of Air Liaison Officers (ALOs), Forward Air Controllers (FACs), and enlisted personnel who serve as the backbone of the entire TACS. These men provide the control and coordination that make close air support both effective and efficient.

The geographical area served by I DASC was unique in many ways. I Corps was comprised of the five northernmost provinces (Fig. 1) of South Vietnam. The province boundaries traversed the country from the sea to the Laotian border on the West, except for Quang Ngai province which abutted Kontum province on its western border. From North to South, the provinces were: Quang Tri, Thua Thien, Quang Nam, Quang Tin and Quang Ngai. Hue, the ancient royal capital, was in Thua Thien province and Da Nang, the principal city, was in Quang Nam.^{10/}

From west to east, I Corps was characterized by three types of terrain: a wide belt of mountains and deep valleys in the west that extended to the sea north of Da Nang, a narrow transition band of piedmont in the middle, and a relatively arid coastal plain in the east. The mountains were covered by dense hardwood forests and brushwood that provided easy concealment for enemy activity. On the high plains and in the valleys, the vegetation was mostly brushwood with occasional, small, cleared farming areas. Rice was cultivated in the lowlands. These lowlands were the "strategic keys" to I Corps, since they contained most of the people and were the most productive areas. I Corps received

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the full effect of the Northeast Monsoon (from early November to mid-March) and only part of the Southwest Monsoon (from mid-May to late September). Generally, poor flying weather could be expected from September to December, with the best weather occurring in April and May. This area, with its difficult terrain and climate, was the scene of some of the most dramatic actions of the entire war.^{11/}

Force Dispositions-1968

Spread throughout this area were the 94 friendly maneuver battalions within I Corps Tactical Zone (I CTZ). The Army of Vietnam (ARVN) units had areas of operation (AOs) along the coast with the 1st ARVN concentrated around Hue, the 2d ARVN in Quang Ngai province, and the forces assigned to Quang Da Special Zone (QDSZ) protecting the vital city of Da Nang. The Free World Military Assistance Forces (FWMAF) were divided into the Northern CTZ and the Southern CTZ. Although the CG, III MAF, was responsible for the entire corps, the forces within the northern two provinces were under the operational control (OpCon) of Headquarters, XXIV Corps, commanded by a U.S. Army general officer. The XXIV Corps was composed of the 3d Marine Division (3 MARDIV), the 101st Airborne Division (101st ABN), and the 1st Brigade of the 5th Infantry Division (Mechanized) (1st Bde, 5th Mech).

The latter unit was under operational control of the 3 MARDIV. In the southern three provinces, under the direct operational control of the CG, III MAF, were the 1st Marine Division (1 MARDIV), the Americal

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Division (composed of three formerly independent infantry brigades),
and the 2d Republic of Korea Marine Brigade (2 ROK Mar Bde).^{12/}

The primary air support for I Corps came from the 1st Marine Air Wing (1 MAW) headquartered at Da Nang Air Base. At Da Nang and Chu Lai, 1 MAW had 109 F-4s, 70 A-4s, and 41 A-6s. Air Force support came primarily from the three squadrons of F-4Ds of the 366th TFW (the Gunfighters) at Da Nang, four squadrons of F-100s of the 37th TFW at Phu Cat, five squadrons of F-100s from the 31st TFW at Tuy Hoa, and occasional F-4Cs from the 12th TFW at Cam Rahn Bay. Additional air support came from the A-7s, A-4s, A-6s, and F-4s off three carriers of Carrier Task Force 77 on Yankee station in the South China Sea. ARVN units also^{13/} received additional support from the 41st VNAF Wing at Da Nang.

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CHAPTER II

SIGNIFICANT EVENTS: 1965 - 1968

The Situation in 1965

On 8 March 1965, in response to a steadily deteriorating situation in I Corps and all South Vietnam, the 9th Marine Expeditionary Brigade (MEB) came across the sands of China Beach at Da Nang to be greeted by local dignitaries. Before this influx, Da Nang had a contingent of about 700 Marines which had been part of a Marine helicopter squadron established in I CTZ since 1962. By June 1965, there were 16,500 Marines in-country.^{1/}

In June 1965, the Viet Cong began a significant increase in offensive activity in all facets of the war. The VC made headway in their attempt to neutralize government pacification efforts and to engage and destroy the armed forces of South Vietnam. A major VC effort came in the Quang Ngai area on 29 May 1965, as the enemy attempted to capture this vital coastal city to further enhance his position in I Corps. The attack was spotted by a VNAF FAC and I ASOC sent a total of two A-1Hs, 22 F-100s, two B-57s and 10 USMC F-4Cs in support of the defenders. By 4 June, the attack had been repulsed with high government losses, but airpower had been instrumental in preventing a major setback.^{2/}

Heavy enemy activity continued throughout the summer with North Vietnamese Army (NVA) presence becoming increasingly evident. The level

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of activity reached its highest peak in November 1965. Of particular significance to I CTZ was the VC attack on the district headquarters in Quang Tin province. The enemy overran the headquarters and held it for several days, until it was recaptured on 18 November 1965. The attack cost the enemy 363 killed, most of which were the result of air activity.^{3/}

During this period, Air Force activity had been growing and expanding to cope with the enemy threat. TAC fighter squadrons, temporarily assigned to South Vietnam, were replaced with squadrons assigned on a permanent basis. By November, Da Nang had two squadrons of B-57s and 18 F-4Cs.^{4/} The 20th TASS had become fully operational in September^{5/} and was providing full support for the I Corps, Visual Reconnaissance (VR) program which had also been implemented that month.^{6/} By the end of the year, the combined USAF, VNAF, USMC, and USN tactical air fleet was flying strike sorties in South Vietnam at the rate of more than 10,000 sorties per month, of which the USAF resources contributed more than 50 percent. This represented a 550 percent increase in air activity over the previous year.^{7/}

A most significant operation took place between 8-18 December 1965. Code named HARVEST MOON, the operation was planned as a combined USMC/ ARVN attack on the Song Ly Valley complex to break up the 1st VC Regiment, which had established a base of operations in the area. Although the 2d ARVN Division was scheduled to participate in the operation, the ALO with the division was denied access to the planning sessions even though

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he had made several efforts to gain admittance.^{8/}

Early on the first day of the operation, the Marine Forward Observer team was knocked out of action, and there was no contact between the ground teams and the Marine DASC. USAF O-1s flying in the area observed a fire fight and called back to I DASC for information. I DASC made contact with the Marines, and was able to relay messages between the Marine ground units and the USAF FACs. Although they had not been briefed on the scheme of maneuver, frequencies, or other aspects of the battle, the USAF FACs took over the direction of the close air support effort and directed 47 USAF and Marine sorties in support of the beleaguered ground forces. Marine units had been unable to reinforce, because the contact had occurred one day earlier than anticipated and the Marine reaction plans did not make provision for this.^{9/}

Throughout the night and the next day, USAF units continued to support the ARVN rangers. Flare support was provided throughout the night, but the next morning the VC broke the ARVN perimeter and the ARVN began a withdrawal. O-1Fs on a routine VR mission directed fighters in support of the ARVN retreat and directed retreating forces away from VC ambushes. In addition, the USAF FACs controlled Marine fighters who were in the area but who had no Marine FAC to direct them. The general air situation on 9 December was confused. There was sufficient air available, but the command and control of it was weak. At 0930 hours, the airborne Marine DASC began handing off fighters to the Air Force

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FACs. This worked well until about 1300 hours when a Marine helicopter began directing landing zone (LZ) pre-strike fighters in the general area where the USAF fighters were directing close air support of ARVN units. On 9 December 1965, 32 A-4s, 29 F-4s, four VNAF A-1s, two B-57s and AC-47 gunships flew close air support (CAS) sorties in support of the Marine/^{10/} ARVN units.

The next day, on 10 December, the ARVN units, which had made the initial contact, were extracted from the area and the ARVN Commander withdrew from the combined operation declaring that the ARVN would use air support through USAF/VNAF channels for the remainder of the operation. In the final analysis, Operation HARVEST MOON revealed some major weaknesses in the mode of joint ARVN/US operations in the I Corps area. The ARVN was disturbed over the delayed Marine support of the attacked ARVN units, and the Air Force elements were dissatisfied because the Air Force had not been included in the initial planning, and the fact that no acknowledgment of Air Force support had been forthcoming from Marine or Army sources.^{11/}

This lack of coordination should not have been surprising, since in the initial planning for the deployment of Marine forces into South Vietnam, the USMC had indicated unwillingness to place Marine air under operational control of the 2d Air Division. In April 1965, the Commanding General, 9th Marine Expeditionary Brigade (MEB) had proposed that "CG, 9 MEB exercise operational control over all Marine forces, I Corps area, for tactical operations and close air support".^{12/} In response,

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on 11 April 1965, 2d Air Division had taken the position that air defense and all in-country strikes should be under its control. COMUSMACV supported this position and, on 16 April 1965, directed that Marine air would be under operational control of 2d AD.^{13/}

The problem did not end with this COMUSMACV decision. The End-of-Tour Report (dated 6 June 1965) of Lt. Col. William N. Edwards, Deputy Director of I ASOC, gives ample evidence of this. Discussing his relationship with the USMC, Colonel Edwards said:^{14/}

"Continuing efforts by USMC to conduct air activities outside of existing Tactical Air Control System and Rules of Engagement have increased the workload unnecessarily....Some examples of this activity were attempts to utilize Naval air strikes without Forward Air Controllers or Communications with ground units; and to scramble aircraft from Marine Direct Air Support Center when scramble authority was vested in I ASOC."

Colonel Edwards concluded by saying:

"The actions of the Marine staff officers lead me to believe that they are extremely impatient or intend to usurp 2d Air Division's responsibilities in I Corps and procure control of all air activities for the newly arrived 1st Marine Air Wing (1 MAW)."

By December 1965, the 9th Marine Expeditionary Brigade had become the III Marine Amphibious Force and the 1st Marine Air Wing was in place in Da Nang. The CG, III MAF, had the multiple responsibilities of Commander of all Marine Forces, Naval Component Commander, Senior

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Advisor to I Corps, and Area Coordinator. In his concepts for 1966, he stated that "offensive and defensive operations would be conducted to include close air support, interdiction, reconnaissance, air superiority, air transport, search and rescue, and others as required in the effort to defeat the VC. MAF aviation units would devote priority support to III MAF forces; excess resources would be made available to the 2d Air Division in supporting other forces". When this concept is contrasted with the results of a COMUSMACV-directed study, prompted by the events of HARVEST MOON, a clear doctrinal conflict becomes evident. In the MACV study, 2d ADVON recommended that "directional control of tactical air should not be divided but placed under one commander and directed through a single unified tactical air control system".^{15/}

Thus, the events of 1965 had shown a basic disagreement between the USAF and the USMC over the control of Marine air assets in I Corps, a conflict that was not resolved until the introduction of the Single Manager Concept on 8 March 1968.

Events Shaped in 1966-1967

Expansion of personnel, resources, and responsibilities of the U.S. Air Force in Southeast Asia called for changes in its posture. Accordingly, the 2d Air Division was redesignated Seventh Air Force on 2 April 1966. The 7AF strike assets increased from 388 aircraft in the beginning of the year to 633 by December 1966.^{16/}

During 1966, the main VC strategy appeared to be an attempt to

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isolate Saigon and seize control of the highlands. Pressure was kept on I Corps by the presence of an enemy division in the Quang Ngai area and by continued infiltration through the DMZ and Laos. The enemy appeared to have decided on the tactics of a war of attrition with decreased emphasis on guerrilla tactics. The allied response was to meet the challenge of the enemy by searching for and destroying the VC and NVA, and to attempt to develop a workable village-by-village pacification program. Operations were expanded to include probes into the DMZ in an attempt to block enemy infiltration.^{17/}

Of special significance to I Corps was the attack on the A Shau Special Forces Camp on 9 March 1966. The attack against the camp came at a time when poor weather severely restricted air support. On the first day, only 29 sorties were able to expend against the well-positioned enemy. The next day, there was a total of 210 USAF and USMC sorties flown, but the situation at the camp was so serious that it became necessary to evacuate the camp survivors from what had become a deadly trap. During the battle, the enemy lost an estimated 400 soldiers to air attacks and his attempt to annihilate the defenders had been frustrated.^{18/}

In addition to the search and destroy mission, emphasis throughout 1966 continued to be on providing quick reaction capability to meet initiatives. Effective and timely use of airpower could help capture the initiative for the Allies by carrying the war to the enemy's base areas and sanctuaries. By the end of the year, the VC was avoiding major

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contact, while consolidating for a planned winter/spring offensive in conjunction with regular NVA units infiltrated through the DMZ and Laos. The relatively stable situation in the South and the failure of the VC to make any major gains was, in part, a result of the effective application of airpower throughout North and South Vietnam.^{19/}

One problem area that remained unresolved throughout 1966 was the difficult position of the 7AF Commander. Even though he was Deputy for Air, COMUSMACV, he did not control all the air assets within his area of responsibility. From the Air Force standpoint, MACV was a joint headquarters in name only. Attempts were made to rectify this uncomfortable situation, but with little apparent success. However, one encouraging piece of legislation produced during the year was MACV Directive 95-4, dated 28 June 1966, which stipulated that the 1 MAF and Navy airstrike assets would be brought into the Tactical Air Control System in the event of a MACV operational emergency. The significance of this directive was to become much more apparent in 1968.^{20/}

The enemy strategy for 1967 appeared to be much the same as it was for 1966. The VC geared themselves for a protracted war, while continuing to infiltrate increased numbers of NVA regulars into SVN through the DMZ and Laos. The highlands were still the primary objective with the I Corps cities of Quang Tri and Thua Thieu as secondary targets. The basic, allied objective was to take the offensive and continue efforts

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to deny the enemy sanctuary.

The Air Force effort in I Corps continued to expand in 1967 and then leveled off. Da Nang became the home of the 366th TFW and its three squadrons of F-4Cs. Additional USAF fighter support was available to I Corps in the form of two squadrons of F-100s at Phu Cat and three F-100 squadrons and one F-4C squadron at Tuy Hoa.^{22/} The 1 MAF also had 10 squadrons of fighters supporting the I Corps effort. Throughout 1967, U.S. Army units continued to move into I CTZ to allow III MAF to concentrate their thinly spread forces. During the year, elements of the 1st Cavalry Division, 101st Airborne Division (101st ABN) and the Americal Division took up positions in I Corps.^{23/} All these forces placed increasing demands on the I Corps TACS and the 20th TASS.

The 20th TASS began the year with some fifty-five O-1 aircraft which were committed to support of the ARVN, the U.S. Forces, and the out-country effort in the TALLY HO/TIGER HOUND area. Throughout the year, the I Corps control system continued to develop its capability to provide fast response to ground requests.^{24/} However, there were some problems associated with the introduction of the O-2A into the 20th TASS inventory during the summer months of 1967. The O-2s needed longer runways than the O-1s, and it became necessary to operate some O-2s from runways not collocated with the units they were supporting to accommodate the limitations of these new aircraft.^{25/}

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Throughout the year, the DASC continued to modify and improve its procedures and claimed to have almost reached a physical limit in response processing.^{26/} A random sampling of available DASC data logs on a monthly basis from February to September 1967 indicated that there was indeed a general improvement throughout the year in response time (time from cleared request to time over target) and DASC decision time (DSDT). The sample was scrubbed to eliminate all non-ASAP immediate requests, all multiple requests, and all times over 90 minutes which were thought to be unrealistic. With these qualifications, the survey showed that the average DSDT had improved from 8.5 to 5.5 minutes, and the average response time for both scrambles and diverts had improved from 47 minutes to 38 minutes.^{27/}

By the end of 1967, the USAF TACS in I Corps was supporting substantial ARVN and U.S. Army forces with close air support command and control and doing so effectively.

Occurrences in 1968

1968 opened with a bang. On 3 January 1968, Da Nang received 30 rounds of enemy mortar fire which destroyed 3 aircraft and damaged 17. The enemy had begun to move off the defensive and was active throughout I Corps. The biggest threat appeared to be in the Khe Sanh area with heavy activity having been spotted all along the Laotian routes leading into the area.^{28/} Operation NIAGARA, a Seek, Locate, Annihilate and Monitor (SLAM) operation, was planned by COMUSMACV to exploit the

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situation by using all available USN, USMC, and USAF strike, reconnaissance, and electronic warfare aircraft resources in a massive bombing effort.^{29/}

A key element in the operation was to be the 20th TASS Covey FACs who were instructed to give NIAGARA first priority. Airborne Battlefield Command and Control Center (ABCCC) would control all air operations in NIAGARA except for Marine close air support missions. Artillery coordination would be effected by ABCCC and the Fire Support Coordination Center (FSCC) at Khe Sanh. All strikes in the vicinity of friendly troops were to be under FAC control. In agreeing to the operation, III MAF stipulated that Marine air would be used primarily in support of Marine ground forces. All aircraft except the Marine close air support sorties under FAC control would check in with the ABCCC for final coordination.^{30/}

The situation at Khe Sanh had become critical even before the initiation of NIAGARA. Marine ground forces were surrounded and movement out of the camp was severely restricted. A friendly Laotian outpost across the border was overrun on 25 January by NVA troops with armored vehicles. Pressure continued on Khe Sanh and the level of air activity rose accordingly. Between 22 and 29 January, more than 3,000 tactical strike sorties were flown in support of the NIAGARA operation.^{31/}

Suddenly, the TET Offensive began. On the night of 30 January, Da Nang, Hue, Quang Ngai, and 34 of 45 provincial capitals, and many

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military installations, were under attack while pressure was still maintained on Khe Sanh. Although the expected assault on Khe Sanh did not materialize, through 1 February 1968, the sortie rate increased sharply with the fall of Lang Vei and the attack on Hill 861. Khe Sanh came under continuous enemy fire.^{32/} It was during this crucial phase that COMUSMACV (Forward) was established on 9 February 1968 at Hue/^{33/} Phu Bai.

Problems had arisen during the implementation of Operation NIAGARA, because of the lack of coordination and control of assigned forces. The division of the responsibility for Tac Air between the Commander, 7AF, and CG, III MAF, created a situation which was wasteful as well as dangerous, with many different aircraft forced to operate in the close proximity of the Khe Sanh area. Sortie flow was disrupted because of uneven cycling, there was no integrated target base, and the Commander had no clear picture of his overall air effort. In addition, the presence of two tactical air control systems added to the confusion.^{34/}

The issue was resolved when COMUSMACV, recognizing the overriding need for a single point of contact for tactical air resources, directed the Commander, 7AF, to draw up plans to integrate the 1 MAF into the TACS while at the same time respecting the integrity of the Marine air ground team as much as possible.^{35/} The "emergency" clause of MACV Directive 95-4 of 28 June 1966, had finally been implemented.

On 10 March 1968, the Commander, Seventh Air Force, was designated as the Single Manager responsible for coordinating, directing, effectively

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applying, and equitably distributing all tactical air resources throughout SVN and the extended battle area. In a corresponding move, the forces of northern I Corps, were organized into the Provisional Corps Vietnam (PCV) whose commander (U.S. Army) was responsible to CG, III MAF. In recognition of the Corps status of PCV, 7AF directed that a DASC be provided to insure proper control of ~~direct~~ ^{tactical} air support in the area. Consequently, DASC Victor became operational on 10 March 1968 as a subordinate I Corps DASC. ^{36/}

With the implementation of Single Manager for Air (SMA), the two tactical air control systems, one USAF and one USMC, were merged. In many respects they were quite similar. The primary difference between the two was in the scope of operations each was designed to handle. Where the TACC was designed to operate in an area of responsibility encompassing several Corps with several wings subordinate to it, the Marine equivalent, the Tactical Air Direction Center (TADC) was closely tied to the wing structure. The TADC was the Command Post (CP) for the Marine Air Wing commander. In I Corps, the TADC at 1 MAF had control of all the air resources of the 1 MAF, fixed and rotary wing. The TADC closely maintained the wing's activity and passed on its air resources to its subordinate DASCs and Air Support Radar Teams (ASRTs) for control and direction. Until the inception of SMA, requests for scrambles were supposed to be funneled through I DASC before they were launched off the pads by TADC. By the nature of its operation, the TADC combined the functions of: an Air Force Wing Command Post, a TACC, and a DASC. ^{37/}

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In many respects the Marine DASC was the equivalent of a USAF TACP. It was the agency that worked directly with the FACs and controlled their operation. The operation of the Marine DASC was also more complicated in that it had responsibility for managing both fixed and rotary wing resources. As an integral part of the division structure, it was collocated with the division FSCC and maintained close watch on all check fires and Save-A-Planes (artillery firing) as did the AF TACP.^{38/} The Air Support Radar Team was a subordinate agency of the DASC that provided a ground-directed, all-weather precision bombing capability within the DASC AOR. The Tactical Air Operations Center (TAOC) was called "Vice Squad", and it provided Control Reporting Center (CRC) type radar coverage for Marine and Navy aircraft in I Corps. Once the USAF and USMC systems were merged, they effectively complemented each other. One problem that was never completely resolved was the reluctance of the Marine DASCs to go through I DASC or Victor for Troops in Contact (TIC) immediate scrambles.

The Marines lived with the Single Manager system but they believed it was an "imposed" system, which in no way enhanced the effectiveness of the Marine air/ground team. Their chief complaints were that it was producer-orientated and not responsive to the ground commander's requirements. In an effort to alleviate the situation that prompted these criticisms, on 30 May 1968, the Comdr, 7AF, introduced a system of weekly and daily fragmentary orders (frags). This system allowed long-range planning, while retaining a capability to allocate daily air resources to meet the demands of a changing tactical situation.^{39/}

As early as 17 March 1968, COMUSMACV had discussed moving I DASC

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into the III MAF compound at Camp Horn with CG, III MAF. After a general agreement on the concept, construction was begun on a building to house the DASC and plans were initiated to move the DASC from the I Corps headquarters near Da Nang Air Base to Camp Horn located near China Beach. However, not until a meeting of USAF, USMC, VNAF, and I Corps ARVN personnel on 19 July 1968 was there any agreement as to the status of the VNAF in the new DASC. At this meeting, the division of I DASC into two separate DASCs was affirmed. I DASC would become a VNAF facility dedicated to the support of the I Corps ARVN forces, with USAF operations advisors and the USAF ARVN ALO team remaining in the I Corps compound to..."provide advisory services and air support as required...." The new DASC at Camp Horn would be the senior FWMAF DASC in I Corps and would carry the designation Horn DASC. Victor DASC was to be subordinate to Horn DASC with the relationship of Horn DASC to I DASC identical to that of II DASC and DASC ALFA: "one of coordination".^{40/} Horn DASC was slated to become operational on 1 August. On 10 August 1968, the transfer had been completed, with minimum confusion at I DASC, and Horn DASC "assumed operational control of air assets in I CTZ".^{41/}

A significant change in the I Corps TACS had emerged on 5 August 1968 when the 1 MAF began to support an airborne alert Combat Air Patrol (CAP) over Phu Bai. The CAP aircraft stayed on the alert pad for 30 minutes. If the CAP aircraft were not scrambled, they took off and went CAP orbit for about 45 minutes while awaiting an immediate target request. If no high priority immediate targets developed, the fighters would be refueled

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and sent on to hit lower priority targets such as bunker complexes, suspected enemy locations, etc.^{42/} Perhaps the most significant element of CAP was the procedure used to call the aircraft off the CAP. The procedure, as recorded in the DASC Duty Officer's log on 4 August 1968, was as follows: "DASC Victor will scramble the air CAP birds direct through TADC. The TADC will then reconstitute the air CAP and inform us. We'll be sort of an info address without a real piece of the action."^{43/}

The results of the CAP were difficult to assess. Response times were excellent, averaging 14.9 minutes to the target from time of divert, but only slightly more than half of the sorties thus generated were used for higher priority targets such as TIC, troops in the open, gun positions, etc. The rest were used against less immediate targets. This system seemed to generate unnecessary add-on sorties and had dried the USMC pads at least twice during August.^{44/} However, the ground commanders appeared happy with the CAP and on 27 September 1968, 7AF bowed to the inevitable and gave official sanction to the project in a message to Horn DASC, MAF, and the 1 MAW:^{45/}

"1. It is recognized that an airborne alert can be very effective in reducing response time for immediate air requests. However, it can be very expensive in terms of flying hours and unproductive sorties when not in support of major ground actions or emergency situations....

"2. To enable HORN DASC to effectively monitor alert assets, it is necessary that the following procedures be implemented at the earliest date.

a. Marine aircraft operating on airborne alert and scrambled from pads to airborne alert

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will be managed by HORN DASC....

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d. DASC VICTOR, TAOC (Vice Squad) or HORN DASC will utilize airborne alert by providing control information direct to Vice Squad who will vector aircraft to the target area, direct the flight to report to appropriate control agency and notify HORN DASC. The using agency will notify HORN DASC so that airborne alert can be reconstituted through TADC."

After the bombing halt on 1 November 1968, I Corps began to pick up significant numbers of fragged Navy sorties as well as sorties diverted from unproductive or weather restricted out-of-country targets. Initially, 20 Navy sorties were allocated to the in-country effort, but the potential for more sorties existed through add-ons and diverts. Several problems emerged as the Navy began to pick up the in-country commitment. Initially, there was a problem with the accuracy of Navy pilots flying in an unfamiliar environment and working close to friendly troops. New tactics had to be learned by the Navy pilots and the system adjusted to accommodate a limited CAS role for the fleet. As a result of this lack of experience, 7AF felt it necessary to instruct all ALOs and FACs to "...not put Naval airstrikes in close proximity to friendly ground forces" and recommended that "1,500 meters be used as minimum distance at this time". However, it was expected that this restriction could be lifted after the Navy pilots had gained more experience.

Another problem, one which impinged directly on Horn DASC operations and procedures, was the predilection of some Navy pilots to go directly to the DASCs for assignments without checking in through the proper

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control agencies, Panama, Waterboy, and Vice Squad.^{46/} As a result of pressure from Horn DASC, 7AF, with COMUSMACV approval, sent a message to CTF 77 which reiterated the ground rules for Navy operation in I CTZ. The message stated that "Operational control of 7th Fleet Naval aircraft operating in-country must operate within the tactical air control system...." It went on to outline the procedures for fragged missions and add-ons. Weekly preplanned CTF 77 strikes would be fragged into I Corps and weather diverts would be used on COMBAT SKYSPOT missions (strike missions directed by ground radar) in the same zone.^{47/}

By December, the system had been firmly established. All Navy flights entering I CTZ were to check in with Panama, Waterboy, or Vice Squad, in that order. Flights diverted from ABCCC would be directed by ABCCC to contact one of the CRC/CRPs which would vector the aircraft to a controlling FAC, Marine DASC, or MSQ/TPQ as directed by Horn or Victor DASC. When the aircraft was an ABCCC divert, ABCCC would notify BLUE CHIP (Out-country Combat Operations Center) of the divert and the DASC would forward the BDA to TACC.^{48/}

The problems of agencies working outside of the established system had been endemic to I Corps even before the inception of the Single Manager system. This process occurred when unusable air resources were passed from one Marine agency to another without informing the AF DASC which had overall responsibility. The duty officer's log contains many examples of this process. In September 1968, the Duty Officer recorded:

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"Vandergriff DASC is diverting the Marine air they cannot use to Da Nang DASC without DASC Victor (V) knowing about (it). This was reported to Major Cookson. He called TADC and TAOC is going to talk to Vandergriff and Da Nang DASC about diverting without asking DASC V or Horn DASC."^{49/}

The procedure for diverts and scrambles had been clearly established and in all cases either Horn or Victor DASC was to be kept informed. If it decided to honor a scramble request from a Marine DASC, TADC was to be kept informed.^{50/} When it did honor a scramble request from a Marine DASC, TADC was supposed to call Horn DASC, while the scramble was in progress, so the Horn Duty Officer could check his data display boards for a possible divert. If there were a divert available, then TADC would stop the scramble. If not, then the scramble would proceed normally with the appropriate times being passed to Horn DASC as they became available.^{51/}

After earlier problems with the Single Manager system had been resolved by the creation of a weekly and a daily frag, the system showed good flexibility and the allocated air was considered to be adequate. However, there were some loopholes in the system that were being exploited by ground units. The add-on system was just one example. The add-ons were additional air requests generated by the wings above those required by the frag. In I Corps there was a gentleman's agreement to use the add-on air to make up for sorties lost by units from the 7AF frag. This system was quite reasonable but certain ground units, such as the 3 MAR DIV, considered add-on air as a matter of course and tended to use this

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system rather than the normal system of preplanned daily requests. On occasion, as seen here, the requesting unit would go directly to the 1 MAW without using the established command and control lines. This practice created hardships for those units which stayed within the established rules.

There were problems with the fragged air also. TOTs were being changed at the last minute and the frag was not being monitored closely enough at the Tactical Air Request Center (TARC) to prevent an unnecessary accumulation of sorties during certain times of day. ^{52/}

Nevertheless, the system had proved itself to be workable and COMUSMACV had a single point of contact for the control of all air assets under his command. The trials of early 1968 had clearly demonstrated the need for such a system, and its creation had given I Corps a tactical air device capable of waging an air battle more effectively and responsibly than any previous system.

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CHAPTER III

HORN DASC OPERATIONS

By December 1968, the I Corps system had become relatively stable. Horn DASC was the central point for the control of tactical air for the CG, III MAF, within his areas of responsibility as senior U.S. Advisor for I CTZ and Americal Division and the Second ROK Marine Brigade in the southern three provinces of the I CTZ and the 3d Marine Division, 101st Airborne Division, and the 1st Brigade of the 5th Mechanized Division in the northern two provinces under the command of CG, XXIV Corps. The ARVN forces supported were the First ARVN Division, the Quang Da Special Zone, and units of the Fifth Special Forces. Under the operational control of Horn DASC were the ALOs and FACs assigned to each ARVN and USA division, the personnel of DASC Victor and Jazzy Control, and the advisory personnel at I DASC.^{1/} (Fig. 2.)

By December 1968, after the shift of the 1st CAV to III Corps, I Corps was being allocated 33 percent of the in-country tactical air assets. In addition to the allocated percentage, other sorties were generated from within Marine air resources to boost the actual I Corps percentage of total FWMAF to something in the vicinity of 42 percent. This included all preplanned, immediate, and add-on sorties, which in I Corps were approximately equal to each other.^{2/}

Basic guidance for the DASC operation came from the "two series"

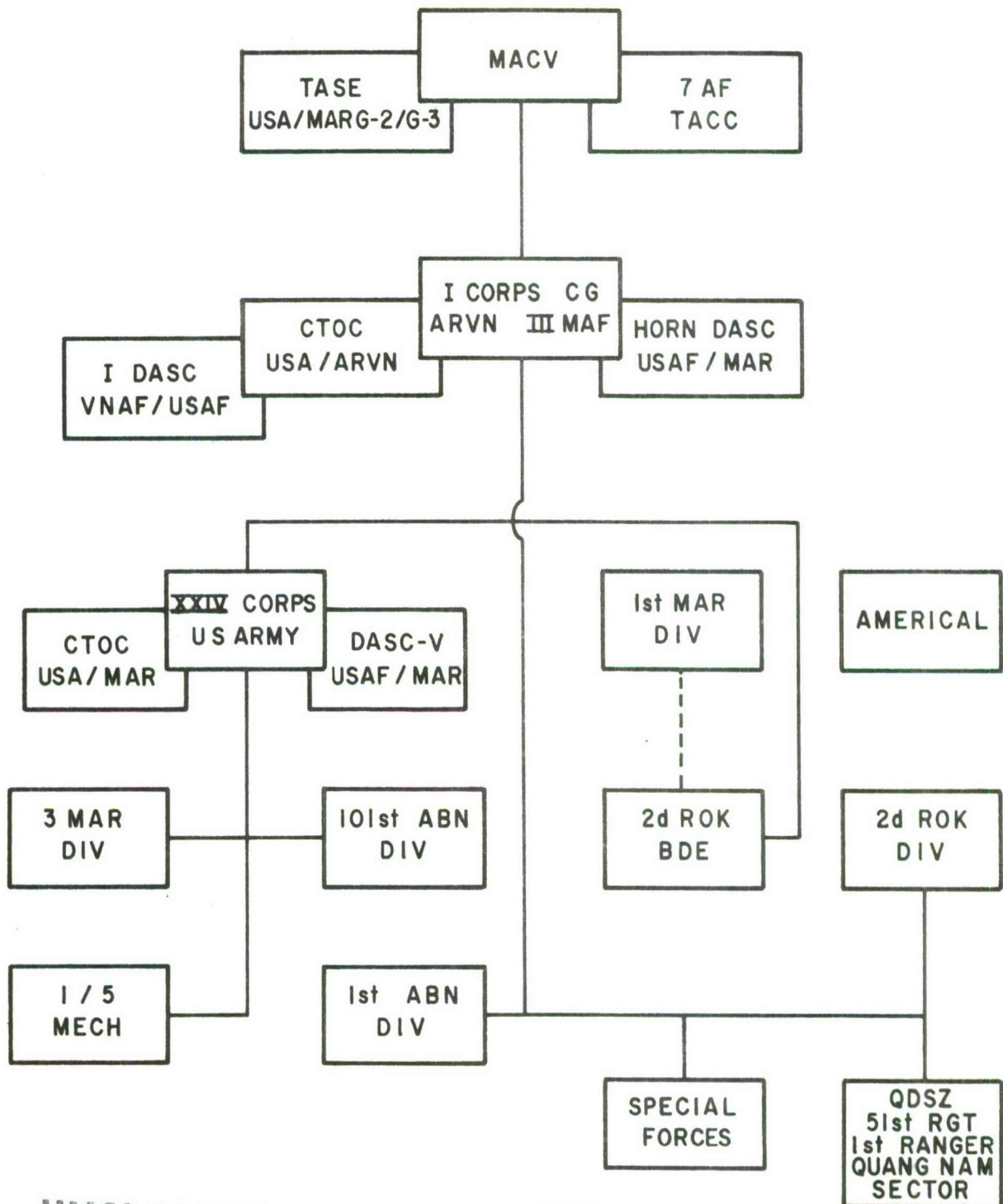
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I CORPS CHAIN OF COMMAND



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FIGURE 2

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Air Force manuals and the directives and regulations put forth by each level of command. The 7AF guidance was contained in the 7AF 55 series pamphlets and specific OPlans such as TRAIL DUST, ARC LIGHT, COMBAT SKYSPOT, GRAND SLAM, etc. Much of the guidance came in the form of messages and letters, or even as the result of telephone conversations with different agencies. All of this information was consolidated into Horn DASC operating instructions and amplified in the duty descriptions for the assigned personnel. Problems arising which were not covered by the basic manuals and directives were solved by the DASC personnel on the basis of their own experience and their understanding of the mission as a supporting element of the III MAF joint command and as an extension of the TACC. As a Direct Air Support Center responsible for employment of Free World Tactical air resources, Horn DASC's primary job was to provide tactical air to support legitimate requirements generated by the ground commanders within the guidelines established by the TACC.^{3/}

The basic instrument for providing this support was the Tactical Air Control System, of which the air request system was the most vital element. This was an "all-ground" system in that requests for preplanned air passed up the Army/III MAF chain of command to the TASE, where they were placed in priority order and passed to the TACC. Except for advice given along the line, the Air Force did not become directly involved in the process, until the ranked requests were matched with available sorties and TOTs. Horn DASC had to submit its own requests for air for the Horn DASC

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interdiction program to TACC, but the sorties to support this program came from out-country allocations. In the northern I CTZ, the requests of the 3 MARDIV and 101st ABN were consolidated at XXIV Corps and forwarded to III MAF. At III MAF, these requests were matched with those of the 1 MARDIV, Americal, and 2 ROK MAR in the southern I CTZ. These requests were all consolidated and then forwarded to the MACV TASE, where they were paired with the requests from the I Corps ARVN units.^{4/} (Fig. 3.)

After TASE priorities were matched with TACC TOTs, the daily frag order incorporating these decisions was passed down to I Corps, III MAF and the Horn, VICTOR, and I Corps DASCs. I DASC posted and monitored those FWMAF sorties which were allocated to ARVN units. III MAF reviewed the frag and made changes in allocations to subordinate units as the ground situation dictated. These changes were passed on to Horn DASC, which also had a copy of the daily frag which it received in the DASC about 2030 hours for the next day's activities. When the frag arrived at the DASC, the sorties were identified only as being allocated to I Corps (the ARVN system) or III MAF (the FWF representative). Horn DASC then checked the I Corps allocations against ARVN requests and posted the approved sorties.^{5/}

The distribution of the III MAF sorties was the responsibility of the Tactical Air Request Center. TARC represented III MAF G-3 Air in Horn DASC. TACC would call the TARC with the sorties for III MAF at about 1600 hours each day. These allocations were matched against the

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I CORPS PREPLANNED REQUEST SYSTEM

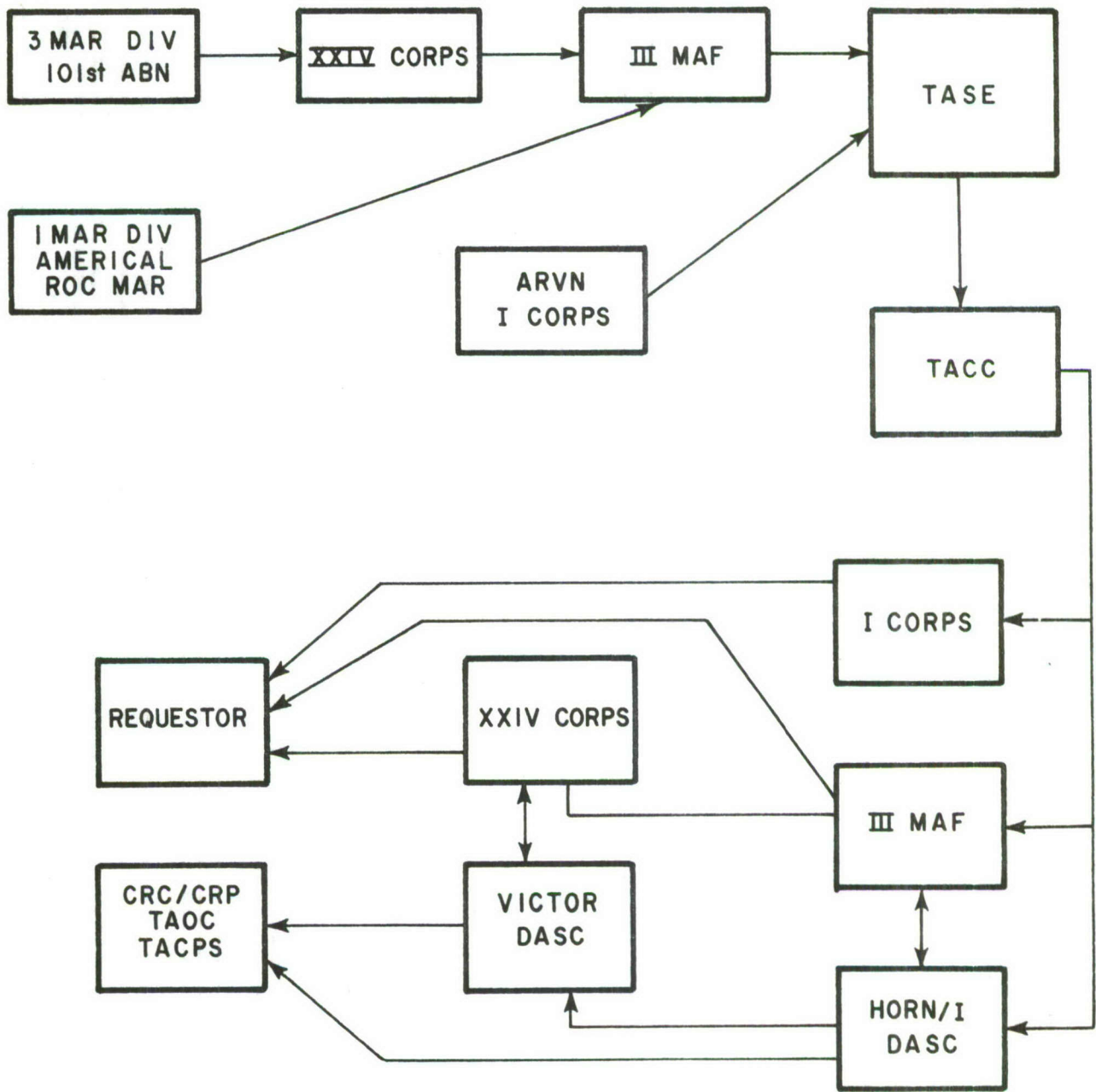


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requests from the field. On rare occasions, sorties allocated by TASE to a unit under III MAF Control were given to another requestor to cope with changes in the tactical situation. This was done infrequently because of the built-in flexibility of the 1st MAW add-on program. The TARC also had the ability to "trade" TOTs from one unit to another or, because of the special relationship of the TARC at the DASC, the TADC adjustments could be made in TOTs and bomb loads at the Air Force and Marine Wings. Once this information was pulled together, it was given to the Data Display technician for posting. Horn DASC passed on the XXIV Corps' air allocation to DASC Victor. This allocation coincided with the allocation given to the XXIV Corps by III MAF. In turn, XXIV Corps reviewed its daily requirement, reallocated its air resources as the ground situation required, and notified the requesting agencies of the tactical air support they could expect for the next day. III MAF provided the same sort of information for the subordinate units under its direct control. The weekly frag came in about 2300 hours each Sunday, and the procedure for handling these allocations was the same as for the daily frag, except there was far less shifting or juggling involved and more advance notice allowed for better planning.^{6/}

Major headings on the display boards which reflected the daily and weekly sortie breakout were: Horn DASC, DASC Victor, ARVN Support and COMBAT SKYSPOT. There were also sections of board allotted to Interdiction, Trail Dust, Beacon, and Spooky/Shadow flareship/gunship missions. A permanent display was also kept of the times that the Marine Flak

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Suppression and airborne alert missions would be flown.^{7/}

Once the missions were sorted out and posted on the display boards, the information was given to the users either through TARC or, in the case of the ARVN, through a direct call to I Corps. In addition, this information was called in to both the AF CRC (Panama Control) and Marine CRC (Vice Squad). Panama and Vice Squad also received a copy of the frag, but they could not control the sorties without rendezvous information which had to come from Horn DASC. This same frag limitation also made it necessary for Horn DASC to call the tactical units flying the sorties and give them the same information. This was the beginning of the control cycle since all aircraft flying into I CTZ had to check in with Panama or Vice Squad. These facilities had the capability to cover for each other, but, usually, Panama handled AF resources and Vice Squad took care of the Marines and Navy. In addition, Panama CRC was responsible for air defense operations, while DASC Victor notified Waterboy radar at Dong Ha of any sorties planned in northern XXIV Corps.^{8/}

At the other end of the control system was the FAC who was under operational control of the DASC through the TACS. The FAC obtained his information from the ground unit he was working with, and it was supposed to coincide with that of the Tactical Unit Operations Center (TUOC) and the CRC. The CRC also had current information on artillery activity in the area and alerted the strike aircraft when it was necessary for them to avoid active artillery Save-A-Planes. If everything went well, Horn

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DASC had nothing to do with the preplanned strike until it received field reports of the BDA. The intelligence specialist in the operation center was charged with collecting the BDA information from various sources. His primary sources were the TACP with the Americal Division for CAS in their area, the Da Nang Marine DASC for Marine and ROK CAS and CSS sorties, the TACPs associated with ARVN units. DASC Victor reported BDA to Horn DASC for all scrambles flown in the XXIV Corps area and for any other strikes that yielded significant results. When the BDA was missing or late coming in, the Horn DASC intelligence specialist would call and get the BDA from the unit that flew the strike sorties. DASC Victor, as a sub-DASC of Horn, performed a similar function for the XXIV Corps area. One exception to the above communications procedures occurred when sorties were flown in support of the Horn DASC in-country interdiction program. In this case, because the interdiction areas were so close, the FACs made their reports directly to Horn DASC.^{9/}

The add-on request system was a very important element of I Corps air operations. Theoretically, add-on sorties were those generated by the tactical air wings and given to TACC to pass on to ground units who had submitted additional requests for preplanned air after the normal cutoff time for such requests. TACC could apply this add-on air to requests with lower priority that had not been filled from the normal sortie allocation. Under normal circumstances, this system was supposed to work exactly like the preplanned system. The practice in I Corps was somewhat different in that all add-on sorties generated by 1 MAW were

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given to III MAF for I Corps requirements above and beyond the daily and weekly frag. Requests from the field for add-ons came up through their respective channels to III MAF, which matched the add-on sorties against those requests. In actual practice, the field units had standing requests at III MAF for add-on sorties and all sorties generated were used for lower priority preplanned targets, non-time-sensitive targets requested through the immediate request net, or against "Hip Pocket" targets in strike zones or other specified areas.^{10/} In I Corps, this add-on air had become an integral part of the daily air resource planning in the III MAF area of responsibility to the detriment of the total Single Manager Concept.

Immediate requests were those generated from field units in response to a changing situation. The two major categories were time-sensitive and non-time-sensitive immediates. The time sensitive sorties were those involving targets of a fleeting and urgent nature such as troops in contact (TIC), enemy troops in the open, helicopter cover for team insertion and extraction, etc. Non-time-sensitive immediates were requests that were handled through immediate request channels, but which did not require tactical air support ASAP. When a unit encountered a TIC situation, it first checked with its Fire Support Coordination Center to see if the problems could be handled by organic fire. If it were deemed necessary to call on air support, the request was passed on to the Brigade TACP, which passed it on to the Division TACP. If the Division TACP approved the request, it called the requirements into Horn DASC.

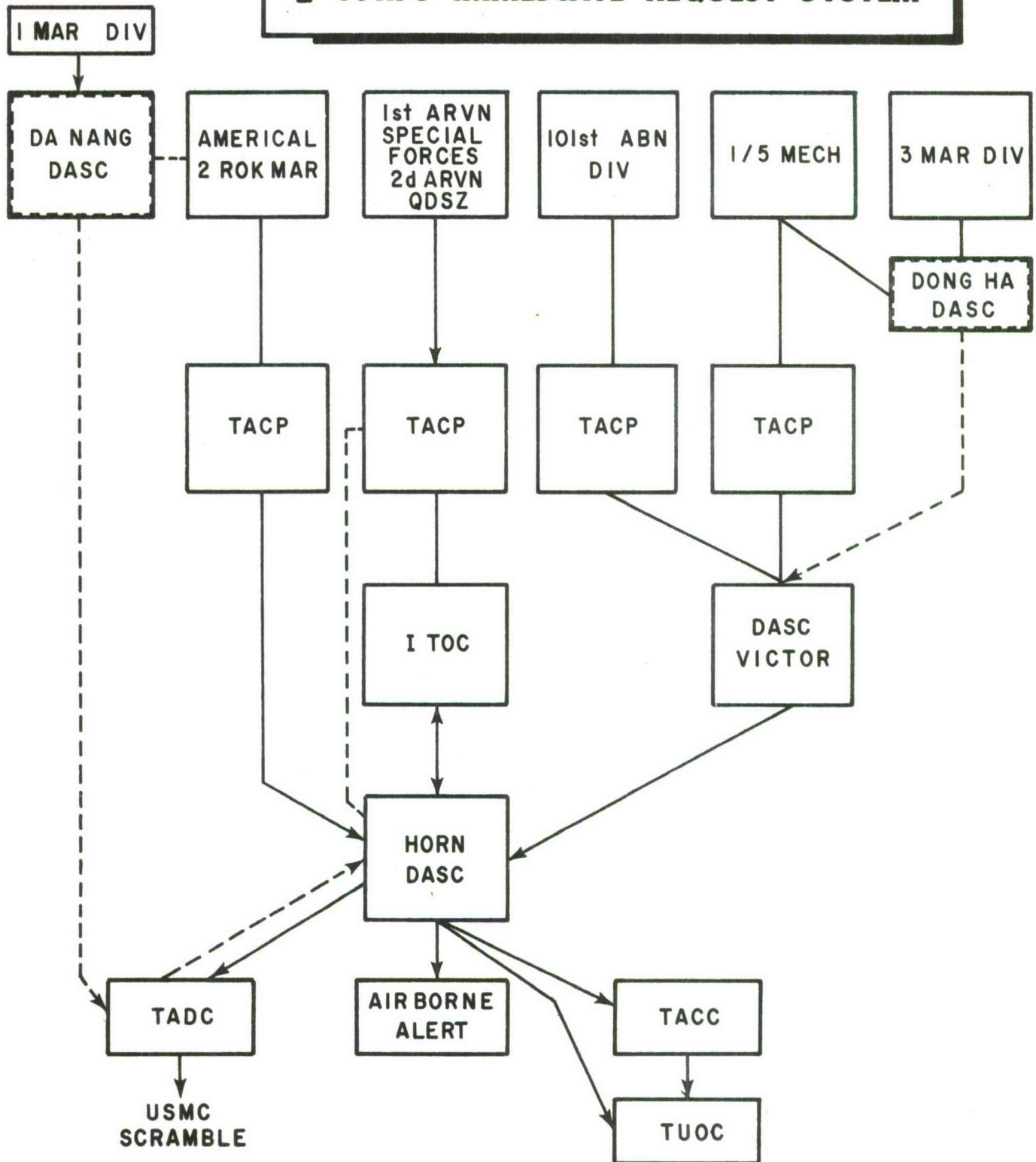
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I CORPS IMMEDIATE REQUEST SYSTEM



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FIGURE 4

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As the request was passed up the chain, political and military clearance had to be received before the strike aircraft could be cleared to expend. Normally, fighters were not scrambled or diverted until this clearance was received.^{11/} (Fig. 4.)

In practice, each of the major elements in the I Corps area, III MAF, XXIV Corps, and the ARVN operated somewhat differently. In southern I CTZ, the Americal requests proceeded through the chain as described here, but the 1 MARDIV forwarded its immediate requests to Horn DASC through the Marine DASC at Da Nang, which functioned as an expanded TACP. Occasionally, Da Nang DASC would receive support from the Marine TADC without the Air Force elements ever becoming involved except on an information only basis. Requests from Da Nang Air Base Defense forces came through Da Nang DASC after being processed by the 1 MARDIV.^{12/}

Within the ARVN system, immediate requirements were passed up through Air Force and ARVN command channels simultaneously. To insure that clearance had been received by the ARVN I TOC, Horn DASC duty officers made it their practice to always check back with I TOC for confirmation. Since the Special Forces had no assigned TACP for their units, the request system for support of Special Forces was different from the ARVN system, of which it was normally a part. When an immediate target developed in a Special Forces area of responsibility, the FAC passed the target information to his TACP, while the Special Forces Commander obtained military and political clearance from the appropriate RVN officials in his area. The Special Forces element forwarded this request, along with

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the initials of the approving authorities, to C Company, 5th Special Forces at Marble Mountain, Da Nang. In turn, C Company passed the cleared request along with a request number, to G-3 Air at I Corps TOC. At the same time, the TACP passed the information from the FAC to Horn DASC which contacted G-3 Air at I TOC. There, G-3 Air reviewed all aspects of the request and then notified Horn DASC when the request had been cleared and approved. Normally, this process was not too cumbersome, and clearance times as low as five minutes were not unusual. However, problems developed when there were other friendly troops in the area. Under these circumstances, delay times of up to several hours were encountered while the G-3 Air at TOC attempted to fix the exact location of all ground units, such as recon platoons or Regional Force/Popular Force (RF/PF) units. The problem became extremely complex when a Special Forces Camp was under siege. When this occurred, elements of several different forces flooded into the area. To overcome this problem, there was a provision to establish within the besieged camp, a fire support coordination center with representatives of all elements involved, thus providing a capability for instant political and military clearance for all levels of command.^{13/}

In the XXIV Corps area, all immediate requests were funneled through DASC Victor before they were passed on to Horn. If the request could be handled more quickly by diverting sorties under Victor's control, then action by Horn DASC was not required. As in the southern I CTZ, Marine units and any Army units on joint operations in the vicinity, requested their air through their own DASC, which forwarded that request to DASC

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Victor. In contrast to the 1 MARDIV, the 3 MARDIV should have had limited contact with the 1 MAW TADC. However, as shown in the duty officer's logs, the 3 MARDIV did not hesitate to go directly to the source of the air, if it felt its needs were not being satisfied. ^{14/}

The immediate air request system was the bread and butter of a DASC. Many of its other functions could be picked up by other agencies, but only the DASC had the minute-to-minute grasp of the tactical air situation needed to provide instant response to immediate requests. Horn DASC had four primary sources of immediate response tactical air: (1) Diverts of preplanned sorties in I CTZ; (2) The Marine airborne alert; (3) Scrambles off the Marine pads at Da Nang and Chu Lai through the TADC; or (4) Scrambles of Air Force aircraft by or with the consent of the 7AF TACC. The first choice for TIC immediates at Horn DASC was the Airborne alert aircraft, which usually carried an ideal ordnance load for TIC (MK-82 or M-117 hi-drag bombs and napalm). The scramble pads were usually the next choice since the munitions carried were generally more satisfactory for TIC than the munitions on preplanned missions. The final option was to divert preplanned sorties to the requestor. It must be emphasized that this was merely a basic set of priorities. When the ground forces indicated there was a serious need for tactical air support, then time became the essential factor, and the most available aircraft was sent to the target area. In an emergency, out-country air and Naval air could also be used. The rule of thumb used by Horn controllers for reaction times from the time the DASC received the approved request, until the fighters' rendezvous with the FAC was: Marine Air CAP-5 minutes Northern I CTZ-10 minutes

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Southern I CTZ, Marine alert pads-25 minutes, AF alert pads-25 minutes. Diverts varied with the situation--a working average of ten minutes was considered reasonable. Horn controllers felt confident that in an emergency situation, and given the large number of sorties allocated to I Corps on any given day, they could get some tactical air to a FAC within 10 minutes of the time they received the approved request.^{15/}

During the hours of darkness, the Horn controller possessed an additional quick response capability in the airborne Spooky (AC-47s) and Shadow (AC-119s) gunships. These aircraft were directed by the DASC to ground units requesting assistance and turned over to the ground commander for control and direction. The airborne gunships were backed up by AC-47s on 15- and 30-minute ground alert. The controller also possessed the capability of diverting COMBAT SKYSPOT missions during night or weather conditions, and could scramble Air Force alert aircraft from pads in I CTZ. The average response time used by controllers for these sorties was about 30 minutes. Another tactical air resource that Horn DASC controlled was the "available divert". This air was an out-country strike aircraft which for some reason could not expend its ordnance on the primary or secondary target. These aircraft were handed over by Hillsboro ABCCC to Vice Squad, the Marine CRC. Vice Squad passed information on the aircraft to the Horn duty controller, who was constantly aware of the combat situation and ground activity throughout the I CTZ. The duty officer utilized these "available divert" aircraft by turning them over to FACs for use against available targets in their area, or by diverting them to the control of CSS sites which used them to strike

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certain, pre-cleared targets. ^{16/}

It would have been useful to compare the "rule of thumb" values of reaction times with the computer data assembled at 7AF Headquarters, Tan Son Nhut Air Base. However, the data base available in 1968 for I Corps made such analysis impossible. Computer runs and statistical analysis of the resulting data produced such inaccurate information that the base for 1968 was considered useless. ^{17/}

Fortunately, there was a survey run conducted for the Directorate of Tactical Analysis for the period 22 March to 2 April 1968. During this period, immediate requests were received which totaled 115 targets (54 TIC, 15 VC in the open, 12-Active AA, and 34 other lucrative targets). For these targets, there were 382 immediates processed, of which 250 were scrambles averaging 39.2 minutes, and 132 were divers averaging 22.0 minutes. Processing time was estimated at one minute for I DASC and three minutes for DASC Victor. ^{18/} Although these times were somewhat higher than the "rule of thumb" indicated, they were well in accord with the common 20/40 rule used throughout the TACS in RVN. (See CHECO report "Air Response to Immediate Air Requests in SVN", 15 July 1969.) ^{19/}

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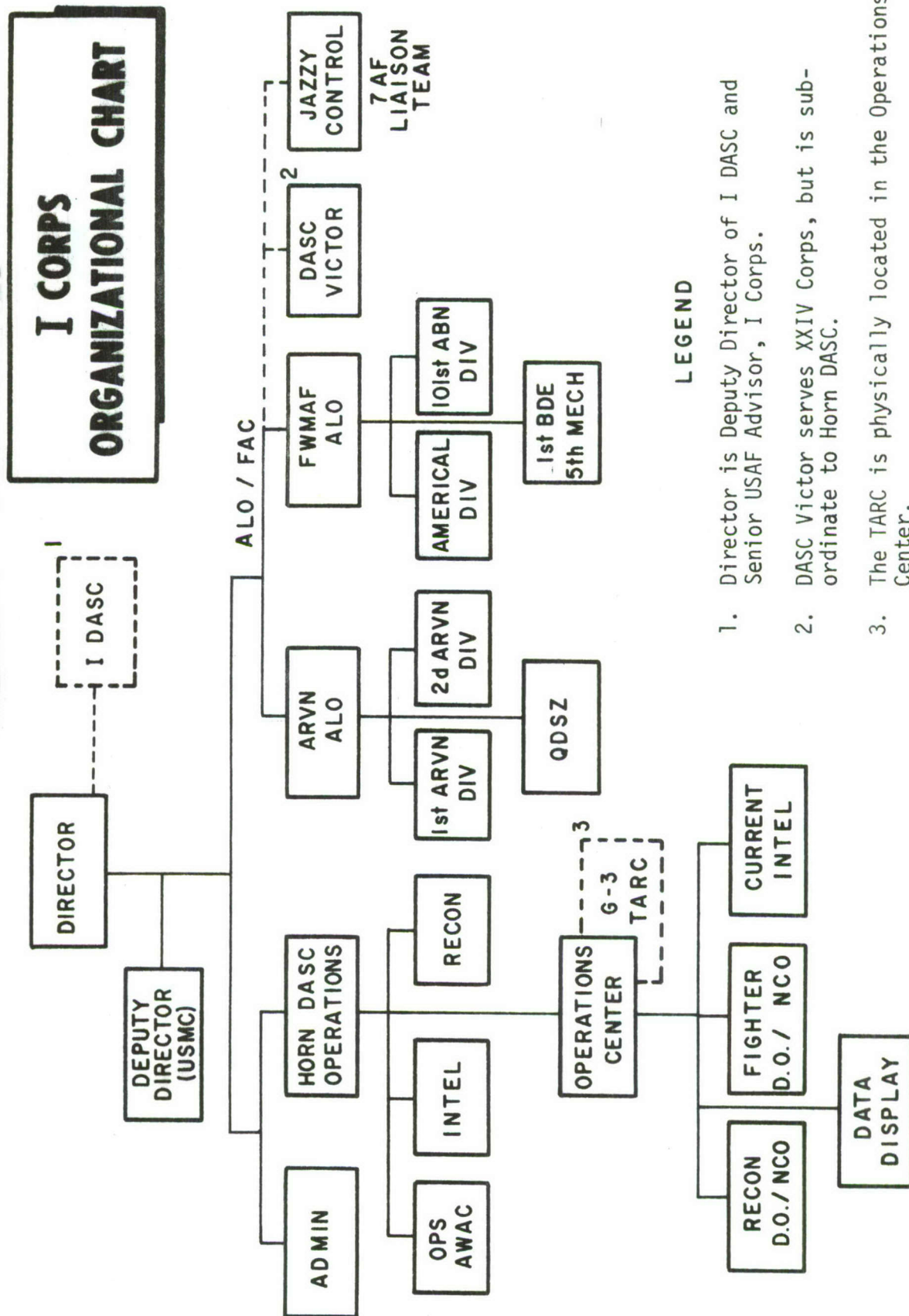
CHAPTER IV
ALOs AND FACs

The Director of Horn DASC was the Senior Air Force Liaison Officer to CG, III MAF, and Senior Air Advisor to CG, I Corps. Directly subordinate to the TACC Director, he represented the Commander, Seventh Air Force, on all matters relating to Air Force ^{TACTICAL} ~~direct~~ air support in I Corps. Since the Marine Amphibious Force was already an "air-ground team" with many air advisors on the staff, the Horn Director was not so much an advisor as he was the 7AF Liaison Officer to a predominately Marine staff. The Deputy Director of Horn DASC was a Marine Lieutenant Colonel who performed a similar function at Horn DASC: that of providing liaison between the DASC and the 1 MAW.^{1/}

Aside from his advisory and liaison functions, the Director had two areas of direct responsibility. He supervised the staff operations activity of the DASC and was responsible for the direction and supervision of the ALOs and FACs in I Corps. Supervision of the ALOs and FACs was exercised through the ARVN I Corps ALO and the I CTZ FWMAF ALO at Horn DASC. The operations function of the DASC was supervised by the Staff Operations Officer. The major subdivisions of operations were operational analysis, intelligence, reconnaissance, and the operations center. The operations center was the control hub of the I Corps DASC system. It was manned continuously and provided the Director with direct control over all tactical air assets committed to I Corps.^{2/}

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FIGURE 5

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The majority of Horn DASC's contacts with 7AF TACC and its related agencies came through the operations section. The staff operations officer was the chief point of contact with 7AF TACC staff agencies above the Senior Duty Officer level, while the Senior DASC Duty Officer and the other duty officers in the operations center coordinated with the TACC at the working level. The operations section also worked closely with the TACC on any test programs that were conducted in I Corps (Fig. 5).^{3/}

One area of continuous contact between the TACC, DASC, and the FACs was in the Specified Strike Zones (SSZs). These were zones set aside in support of the in-country interdiction program. The SSZs were selected areas along major infiltration routes in which Horn had unrestricted access to allow for a full-scale interdiction program. Visual reconnaissance and strikes in these areas were accomplished by elements of all nearby TACPs and the sorties were fragged directly to Horn DASC from out-country resources. Small SSZs were also established in Laos to permit Horn DASC to work on those portions of infiltration routes leading directly into I Corps that were considered to be an extension of the in-country war.^{4/} Another area of continuous interest was the unique position of Horn DASC in the Single Manager system. The Director and his operations staff had to insure that the system worked smoothly and was responsive to the users. Throughout 1968, the staff and Director were constantly working with the TACC, III MAF, and the units in the field, and their TACPs to resolve any difficulties that emerged in the system.^{5/}

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As mentioned previously, there were two forward air control systems in I Corps, the FWMAF and the USARVN FACs. In the FWMAF system, there were three major units supported by Horn DASC ALOs and FACs. These were the Helix FACs with the Americal Division at Chu Lai, the Bilk FACs with the 101st Airborne Division at Camp Eagle, and the Barky FACs with the 1/5th Mechanized Infantry at Quang Tri North. In the ARVN system, there were ALOs at each of the two major ARVN divisions and ALOs and FACs in each province plus additional FACs supporting the 5th Special Forces and the Quang Da Special Zone (QDSZ). Together, the ARVN and FWMAF FACs represented a total of approximately 90 ALOs and FACs flying O-1 and O-2 aircraft.^{6/}

The 20th TASS provided essential support for this system by providing the men and materiel necessary to perform the mission, while the ALOs and FACs at their Forward Operating Locations (FOLs) worked out separate arrangements for housekeeping facilities with the units they supported. This arrangement occasionally created problems for the DASC Director, since the resources he needed to accomplish his mission were controlled by the 504th TASG at Bien Hoa. The confusing support picture at the Forward Operating Locations also created occasional difficulties and hampered mission effectiveness when the aircrews and support personnel had to devote valuable time to make the FOL facilities livable and obtain transportation.^{7/}

At the FOLs, the relationships between the units supported and the

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TACPs entailed functions with many variables. Foremost among these were the personalities of the ALO and the Commander of the unit he supported. If the ALO were respected by the Commander as a member of his staff, then coordination was close and continuous. If the Commander considered the TACP as a rather remote service agency, then the personnel at the TACP had to exert extra effort to keep abreast of the current situation and provide the needed tactical air support.^{8/}

The U.S. and ARVN FACs were distributed throughout the I CTZ with TACPs in each province. The system was manned with both "A" FACs (AFSC 1444A) and SCARs (AFSC 1444B).

The sector FACs were responsible for the area VR programs in the ARVN AOs and doubled up with the division ALOs to support the U.S. and ARVN military advisors and the Special Forces units in their area. The Sector FACs also provided assistance and occasional training for VNAF FACs who were working with local units.^{9/}

Coordination and Control

The procedures for the actual control of airstrikes by USAF FACs were basically the same throughout I Corps. Although each FAC used the techniques that he was most comfortable with, basic guidance for procedures came from the 20th TASS Information Booklet, the 20th TASS FAC Tactics Manuals, the In-Country FAC Training Program, and the FAC training at Holley Field, Florida.^{10/} The FAC received information relative to the strikes he would be controlling from his TACP or one of

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the Marine DASCs. On preplanned missions, he was expected to be in the target area at least 30 minutes before the TOT. If his target were to be in support of ground troops, the FAC would check in with the unit and obtain further target information from the ground commander. If the user had no specific target, he would request that the FAC investigate a certain area and strike any suspected enemy locations. The FAC would check the assigned area and if he saw anything that looked promising, he would recheck the coordinates of the area for clearance with the DASC or TACP he was working with.^{11/}

The fighters, checking in with the TACP or DASC after handoff and vectoring by the CRC, were passed on to their controlling FAC. The fighters would then report the time of first contact with the FAC, the number and type of aircraft, and mission number. After this, they would inform the FAC of the type and amount of ordnance they carried, the maximum time they could stay in the area, and their current position.^{12/} Having obtained this information from the fighters, the FAC would begin to work out a rendezvous with them, while relaying the essential target information. The FAC would describe the target, giving the target elevation and height of the nearest obstacles, warn of possible ground fire, and relay the current weather in the target area (including current altimeter setting). As the fighters came closer, the FAC would give further information such as location of friendlies, recommended attack heading, FAC-holding position, and the recommended bailout heading. Once this information was received and acknowledged, the FAC was free to conduct

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^{13/}
the strike.

When the fighters were in visual contact, the FAC would set them up on a downwind-base, call for a specific type of ordnance, and then notify them that he was going to mark the target. The FAC would then quickly roll in, fire his marking rockets, and pull back up in a position to check his mark and observe the fighters. When the fighters acknowledged the mark, the FAC would give corrections from the mark to the target and any other information that might be required. The fighters would call in "wings level" on final and, if the run-in heading looked good, the FAC would clear the fighters "hot"! Subsequent marks would depend upon the visibility of the target and any other adjustments the FAC wished to make. Often adjustments would be made on the basis of the skill displayed by the fighters. If they were accurate and followed his directions, they might be worked closer to the friendlies or, if the opposite were true, they might be moved farther out, or even sent back to their base or carrier, if they could not follow the FACs instructions or flew in an unsafe manner. If there were several flights in the area, the FAC would request subsequent flights to hold high in the vicinity of the target, so they could get a "feel" for the target. If several FACs were working in a congested area, the DASC had the option of designating one of them the "On-Scene Commander".^{14/}

Once the strike was completed, the FAC would pass the Bomb Damage Assessment (BDA) to the fighters. Usually the BDA included: (1) the

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coordinates of the target; (2) the percentage of ordnance on target and the percentage of the target destroyed (i.e., 80/100); (3) any significant BDA such as KIA/KBA, bunkers, trenches, etc.; and (4) the time on and off target. This information was picked up by the TACP and recorded and also passed by the fighters to the CRC, which relayed the information to the appropriate DASC, where it was entered in the DASC data logs, thus completing the last link in the command chain that had started with the frag received at the DASC on the previous day.^{15/}

This process was repeated hundreds of times a day in I Corps. There were, of course, variations. COMBAT SKYSPOT was used in place of the FAC during hours of darkness or in weather. Some missions were in support of herbicide operations or covered helicopter inserts or extractions. Sorties were used to cover airlift assault aircraft going into areas of known enemy fire, and many were used in the interdiction zones and cleared areas where there were no friendlies to worry about. With the exception of CSS missions, the FACs were ultimately responsible for the effective use of tactical air in I Corps. There are no complete records that reflected the true scope of FAC activities in 1968. The only complete summary available is the monthly activities report of the Americal Division TACP for August 1968. In that month, which was a fairly representative month for I Corps, 18 FACs flew 520 sorties totaling 1,480.3 hours controlling 733 fighter flights. This averaged 28.9 sorties per FAC, 81.2 strike sorties per FAC, and 82.2 hours flying time per month per FAC.^{16/}

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Summary

By the summer of 1969, the Single Manager system had proved to be flexible and responsive. Operations such as APACHE SNOW, a multi-battalion helicopter airborne assault into the Northern A Shau Valley, with nearly simultaneous landings in eight landing zones conducted on 10 May 1969, demonstrated the ability of the system to provide a surge capability far in excess of daily allocations.^{17/} For this operation, Horn DASC was able to obtain 96 additional sorties for what was essentially a reinforced brigade. This was just one example of the type of support the system could deliver to meet legitimate requests.^{18/} The Army's satisfaction with the system was clearly expressed in a letter to the Director of Horn DASC by Maj. Gen. Melvin Zais, USA, on conclusion of his tenure as CG, 101st Airborne Division.^{19/} It said, in part:

"The close air support obtained and coordinated through your organization has been a key factor in the success enjoyed by the 101st Airborne Division. Timely and responsive reaction to the varying needs of this Division has been continually noted in your daily support. The aggressive professionalism exhibited by members of your command has produced tactical air support that has been safe and reliable for friendly forces while being devastating to the enemy."

Although there were still areas where Horn DASC had less than full control of all tactical air assets in I CTZ, such as the sorties scrambled or diverted for helicopter support, or sorties scrambled or diverted through the "back door", the system had proved itself and was unlikely to undergo any drastic changes in future operating procedures. The Marines

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spoke against the system at every opportunity,^{20/} but they accepted it and did their best to keep it working at peak efficiency. The Horn DASC Director was quite satisfied with the system in spite of the occasional problems that cropped up. When asked if the system had proved itself sufficiently well to become an integral part of United States military doctrine,^{21/} the Director said:

"Definitely so. Our methods and techniques of waging a tactical air war have become so varied and complex that we cannot allow several independent operations to be taking place in the same battle area at the same time. The system is flexible enough to allow the traditional close relationship of the Marine air and ground arms to continue with only minor modification to the Marine system. This DASC has the capability of providing responsive tactical air support to all services in I CTZ and has been doing so for more than a year now."

The success of Horn DASC was vital to the war in I Corps, but its importance did not terminate there. The precedence established in I Corps would have a definite impact on future military policy and all participants in the I Corps TACS were acutely aware of their responsibility toward the future. As a result, I Corps TACS personnel, USAF and USMC, put extra effort into their work to insure that lack of individual effort would never become a factor in future debates.^{22/}

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CHAPTER V

DASC VICTOR

DASC Victor became operational on 10 March 1968. It was organized to provide more responsive air support to the newly established Provisional Corps Vietnam (PCV).^{1/} When PCV became the XXIV Corps, Victor retained its original name and its function as a subordinate DASC of Horn, dedicated to assisting the CG, XXIV Corps, in the command and control of I CTZ tactical air assets allocated to the XXIV Corps area. On the surface, the operation of DASC Victor was much like that of other AF DASCs, but there were some major differences. The operation at Victor was much simpler than at Horn. Although the data display boards appeared quite similar to those of Horn, with data displays for 3d Marine Division sorties, 101st Airborne Division sorties, Spooky, Trail Dust, ARC LIGHT and TPQ/MSQ, the volume of work was much less. In addition to having far less sorties to handle, the DASC Victor workload was further decreased, because Horn DASC predigested much of the information subsequently handled by Victor.^{2/}

There were other important differences. For example, there was no TARC at DASC Victor. The TARC at Horn DASC processed the requests that came up from G-3 XXIV Corps and passed them on to the TASE. When TACC made its allocations to III MAF, Horn DASC TARC passed the information to the XXIV Corp G-3, who told Victor whether the sortie would be going to the 3d Marine Division or the 101st Airborne Division. Another very important difference was DASC Victor's lack of scramble authority. Victor had to go to Horn DASC for any aircraft scrambled or taken off

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the CAP. DASC Victor had no operations staff function similar to that at Horn. There was a period from December 1968 to May 1969 when DASC Victor ran an in-country interdiction program in the A Shau Valley similar to the programs of Horn DASC operations and worked areas up to the northern trace of the DMZ, but these programs had been discontinued. One final difference in operations was the ALO/FAC program. In XXIV Corps, the DASC Director had supervisory control over only the XXIV Corps Assistant ALO, a captain, even though the director was the Senior ALO of XXIV Corps. All the other ALOs and FACs were under control of the Horn DASC, ARVN, and FWMAF ALOs. The DASC Victor Director was, in fact, the XXIV Corps ALO.^{3/}

On the more positive side of the ledger, the DASC Director at Victor had a much closer working relationship with the CG, XXIV Corps, than the Horn Director had at III MAF. This was due primarily to the fact that CG, XXIV Corps, had less air advice on his staff than did CG, III MAF, who had the 1 MAW and the entire "air ground team" within his own staff to provide advice. Consequently, the Director of DASC Victor devoted a proportionately greater amount of his time to his duties as the "principal air advisor" to the CG, XXIV Corps. As the senior Air Force representative in the XXIV Corps AO, the Victor Director had a sense of responsibility toward all the ALOs and FACs in the northern provinces, but he had no direct authority over them. Thus, it can be seen that the advisory role was the most important function of DASC Victor's Director, and just about the only function that was not being duplicated elsewhere

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in the system.^{4/} In June 1969, the current director described his advisory role as follows:^{5/}

"As the chief air advisor to the XXIV Corps staff, I must first make myself accessible to the staff. I do this by attending the daily briefings at headquarters, by flying with the staff in the command and control helicopter and by taking the CG or members with me in the DASC 0-2. I dine at the commander's table each evening and conduct many of my unofficial liaison duties there. I fly VR missions almost daily in order to keep current with the tactical situation and problems that might be developing in our ability to perform the Air Force mission most effectively. This includes problems of airfield support and construction at FOLs as well as in-house problems. I naturally keep very close watch on any short round investigations and do my best to unscramble any communication or coordination problems that arise. Since the G-3 shop and the DASC are located in the same underground bunker, we work together quite easily and can clear up many problem areas on a person-to-person basis before they become serious. In addition, I work quite closely with the G-3, confirming or investigating areas of known or suspected enemy activity. Another important aspect of the advice we have given has been our education of the ground commander on the effective use of ARC LIGHT. They have learned well and the results have been gratifying."

The primary units supported by the DASC Victor are the 101st Airborne Division, the 3d Marine Division, and the 1/5 Mechanized Infantry Division, which was under operational control of the 3d Marine Division. Each of these units had a unique way of fighting and each placed different support demands upon Victor. To serve the ground forces most effectively, DASC Victor had to tailor its support to the unit, rather than forcing the units to operate with the same system. The 3d MARDIV expected to have air support available on a continual basis and tended to use its

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airpower as airborne artillery. As a consequence, the 3 MARDIV exercised the immediate request system quite frequently. This, and the longer request process in XXIV Corps, helped explain that the Marine CAP orbited Dong Ha, one of the most northern Marine bases. The Marines contended the necessity of going from the Marine DASCs through DASC Victor and Horn DASC created an unnecessary five-to-ten-minute delay in the air request process, and the northern position of the CAP was an attempt to rectify this situation. On occasion, the Marine DASCs went directly to the TADC with requests for immediate air, passing the information down the official Victor/Horn chain at the same time. The 101st Airborne Division tended to rely more on organic fire and used the immediate request system much less. However, when the 101st did request immediate air, its request was given a high priority. DASC Victor's task was to insure that the legitimate requests of both commands were met.

One feature of the war in northern I Corps was the relatively simple nature of the political clearance process. In this area, virtually all of the population had been moved into the relatively secure coastal plain area under the protection of the ARVN pacification teams, thus leaving the unpopulated jungle as "Indian Country", the area where all non-government personnel were, by definition, "suspected hostile forces". Where ARVN AOs abutted those of the Free World forces, the problem of duplicate clearance channels still existed and delays of up to an hour could be encountered in clearance processing. Given the simpler nature of the clearance process in most of the area and the northern

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position of the CAP, response times from receipt of a cleared TIC immediate request at DASC Victor were often in the vicinity of 15 minute^{6/} and seldom longer than 45 minutes.

Because the XXIV Corps area was bounded by the DMZ on the north and the Laotian border on the west, DASC Victor frequently became involved with the activities of the ABCCC. On occasion, the ABCCC would develop targets within the five-mile buffer zones along the border. When this happened, the ABCCC would contact Victor to obtain target clearance. In turn, Victor would contact the appropriate ground units and process the clearance. DASC Victor also worked with ABCCC when the weather forced the out-country aircraft to seek targets elsewhere. In this case, the aircraft were supposed to be turned over to Waterboy, the 7AF northern CRP for CSS, or to control agencies selected by DASC Victor. Out-country air could also be worked through Jazzy Control, the small 7AF liaison facility at Dong Ha, which worked closely with all northern I CTZ TACS elements.

In general, DASC Victor was quite successful in its avowed purpose of presenting the SMA system and providing good, timely advice to CG, XXIV Corps. The Single Manager Concept had demonstrated its usefulness and flexibility and the response times had been generally satisfactory. The success of the DASC has been due, in large measure, to the personal qualities of the DASC Directors who are responsible for keeping the users happy. The presence of extremely well-qualified officers in these positions

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has won acceptance for SMA where scepticism had existed before.

The very success of these individuals opened up another area of investigation. Was the Director of the DASC of more importance to the system than the DASC itself? If so, would it not have been possible to eliminate DASC Victor, expand the Senior ALO function, thereby cutting request times and reducing redundant functions? Virtually all persons knowledgeable in the system believed this was a step that could be taken.^{7/} At the same time, it was recognized the commander of an Army Corps was entitled to a DASC organization within his staff structure, and that any attempt to further downgrade the status of Victor would meet with opposition.

Regardless of the title given to it, DASC Victor was an integral part of the I Corps TACS, and could not be totally eliminated without degrading a vital element of the I Corps TACS.

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CHAPTER VI

JAZZY CONTROL/ABCCC

One of the smallest elements in the I Corps command and control picture was the 7AF Liaison Team (Jazzy Control) located in 3 MARDIV's Fire Support Coordination Center (FSCC) at Dong Ha Fire Support Base in northern I Corps. The normal complement of the team was one officer and three communications specialists. Jazzy Control became fully operational on 26 September 1968 as an agency of 7AF's Deputy for Out-Country Operations (DOCO). (See CHECO report, "Operation NEUTRALIZE, 5 January 1968".) It remained under direct control of DOCO until October 1968, when the responsibility for its operation was transferred to the Director of Horn DASC. Even after the transfer of responsibility, Jazzy Control continued to be an agency of 7AF DOCO in northern I Corps.^{1/}

Originally, Jazzy was charged with the primary function of coordinating between the Airborne Battlefield Command and Control Center and the FSCC in the optimum use of artillery, Naval gunfire (NGF) and airstrikes in the TALLY HO area.^{2/} However, after the bombing halt in November 1968, there was a significant change in the emphasis placed on these functions. Without a mission north of the DMZ, Jazzy Control's primary function became that of a communications link, connecting the ABCCC to the 3 MARDIV FSCC and Horn DASC. It was particularly useful when there were aircraft diverted into I Corps from out-country resources. This could occur when weather turned sour over the out-country area, or in an aircraft emergency

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situation. When this occurred, the ABCCC would usually contact Jazzy Control for target and control information. Upon notification that a divert was available, Jazzy would contact Vandergriff at Dong Ho DASC for an immediate FAC or TPQ-conducted strike and then notify the ABCCC of the clearance and designate a rendezvous and frequency for the feeder radar (Waterboy or Vice Squad).^{3/}

Before the bombing halt, the out-country fire coordination function was the most important part of the liaison team's work. Since air activity normally had precedence over artillery, the artillery and Naval gunfire into out-country areas had to be cleared by the ABCCC through Jazzy Control. Of particular interest was the TALLY HO area. Here, in a zone approximately 15 miles deep, north of the DMZ, the ABCCC ran the Covey (O-2) and Misty (F-100) FACs, and had the responsibility for coordinating all Naval gunfire, artillery, and airstrikes within that area.^{4/} Jazzy was responsible for initiating all check fires in this area and monitored them to insure that they were not unduly long. Jazzy was also in a position to bring artillery or Naval gunfire to bear on ABCCC or FAC-initiated targets if air support were not available. The process could also be reversed: if the FSCC had a target it wanted hit by artillery or Naval gunfire, Jazzy Control would obtain clearance for this from the ABCCC. Many of the same procedures also applied to CSS missions north of the DMZ with Jazzy Control acting as the point of contact between the TPQ/MSQ sites and the ABCCC.^{5/} Save-a-plane artillery firing information was also monitored, and aircraft were routed around danger areas and check

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fires were initiated as necessary. ^{6/}

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The liaison team had additional coordination responsibilities. It monitored the positions of Studies and Observation Group (SOG) Teams and Marine Recon teams and kept track of the status of the No Bomb Line (NBL) areas. When search and rescue (SAR) efforts were underway, Jazzy kept all the interested agencies informed, coordinated check fires with the SAR forces, and coordinated with Marine or Navy agencies as necessary. Jazzy also kept Waterboy informed of all artillery fires originating in the 3 MARDIV area of responsibility. ^{7/}

The following excerpts from the End of Tour Report of Maj. W. F. McMillen, former 7AF Liaison Team Chief, illustrate the position Jazzy Control had in the command and control chain in 1968:

"...during Operation THOR (1-7 Jul 1968) the liaison team had the only reliable radio contact between the artillery unit supporting the operation and the ABCCC who controlled the air. With the volume of artillery fire and airstrikes planned, both artillery and air were reluctant to stop activities; therefore, it was necessary for the liaison officer to arbitrate the requests and modify the check fires to satisfy both parties."

Major McMillen also described what happened when the ABCCC experienced radio failure:

"At one time the liaison team was the sole control of air for approximately two hours during the operation due to radio failure in the ABCCC aircraft. Since the team had kept abreast of the operation, they were capable of carrying on with the fraggd missions, assigning them to fraggd targets and to take the CRP/GCI site for flight following."

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An additional function mentioned in this report was that of monitoring UFO reports. Information was relayed from forward observation posts through counter-battery intelligence channels to the FSCC, where the liaison team gathered all necessary information into the proper format and passed it on to the appropriate air defense agencies.^{8/}

As mentioned earlier, the bombing halt in November 1968 changed the nature of Jazzy Control's contact with the ABCCC. More and more, the liaison team became an extension of Horn DASC as it coordinated air activities along the Laotian borders of I Corps. Buffer zones had been set five miles into Laos, along the border of certain Marine AOs. The purpose of these buffer zones was to extend the VR and strike capability of air units supporting the ground operations to deny enemy forces a sanctuary along the border. Since the routes and areas in these buffer zones were normally the ABCCC's responsibility, close coordination was required to keep the areas under constant surveillance and coordinate air activities.^{9/}

One situation where the ABCCC worked directly with Horn DASC without going through Jazzy Control was the control of airstrikes and other air activity in the SSZs in Laos that were under Horn DASC's control as an extension of the I Corps in-country interdiction program. Since these areas were assigned to Horn DASC, the ABCCC was supposed to receive permission for any operations it conducted within these zones. ABCCC also coordinated information on NBL activity in the SSZs with Horn DASC and DASC Victor insuring that the status and location of these areas

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were well-known to all aircraft flying in the zones.^{10/}

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One function of the liaison officer that remained unchanged after the bombing halt had very little to do with either Horn DASC or the ABCCC. This was the almost unofficial position of the liaison officer as chief air advisor to the CG, 3 MARDIV, and his staff. The liaison officer attended the nightly fire planning briefings and advised the staff on the proper use of tactical air on targets and the proper targets for airstrikes. Through daily contact, close rapport was established with the G-2 and G-3 officers who, in the liaison officer's words "usually referred to (the liaison officer) for information concerning the Air Force and its activities."^{11/}

Summary

On 1 July 1969, the rated Major, who had been the liaison officer, was replaced by a senior NCO from Victor DASC. With the decreasing likelihood of a resumption of the bombing in the North, Jazzy Control's function, except for the nebulous advisor role, had decreased to that of a communications relay post. Because of this, there was some discussion of the possibility of eliminating the liaison team completely. The primary reason for its continued existence since the bombing halt was the critical role Jazzy Control could play in THOR type retaliation operations. If a minimum of five hours' notice could be presumed before the resumption of bombing, then it was felt that a team from Horn DASC could have been brought in to run the retaliation program. Except for this program, the communication and coordination functions were within

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the capability of Waterboy, and the FSCC Air Watch Duty Officer who was on duty 24 hours per day. The day-to-day advisory functions would have been lost in this reorganization, but this could have been picked up by the senior ALO in the Dong Ha area. Although quite feasible, such a program would have overlooked the problems that had brought the liaison team to Dong Ha originally. As a result it was likely that Jazzy Control would stay on the air for some time in the foreseeable future.

In general, the coordination procedures between the ABCCC and Horn DASC were unchanged in 1969, but there were some areas where the need for an improved coordination effort was indicated. On several occasions, ABCCC related activities had been conducted within the SSZs without Horn DASC's knowledge. Unannounced sensor strings had been laid and interdiction packages had been placed along major NVA routes in the SSZs. Horn FACs had observed unknown strike and reconnaissance aircraft in their VR areas.^{12/} Of particular interest was Vice Squad's occasional diversion of Navy aircraft to in-country high priority targets before ABCCC was notified of the divert.^{13/} Although these lapses in coordination occurred only infrequently, they indicated that some system of periodic meetings between ABCCC and Horn DASC representatives would be useful. These meetings were being held by the summer of 1969.

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CHAPTER VII

I DASC

When Horn DASC became operational ready and assumed control of air assets in I CTZ on 9 August 1968, activity in I DASC dropped off drastically.^{1/} Although the Vietnamese Air Force (VNAF) elements at the DASC retained control of the few VNAF A-1Es and FAC aircraft of the 41st Wing at Da Nang, this amounted to only 12-20 sorties per day to support the ARVN. The units supported were the 1st ARVN Division in northern I Corps. The 2d ARVN Division in southern I Corps, and the Quang Da Special Zone (QDSZ) established for the defense of Da Nang.^{2/} (Later, from January to August 1969, even this modest amount of activity was further diminished as the 41st Wing began to phase out its A-1Es and adopt a training status while the Wing transitioned into the A-37s.^{3/}

As VNAF air activity fell off, the work at I DASC became more oriented toward monitoring the FWMAF sorties allocated to the U.S. ARVN FACs and other air support missions such as CSS, Trail Dust, and Spooky that were fragged in support of ARVN forces. In addition, the VNAF DASC personnel kept track of the VNAF FAC, helicopter, and transport frags. With the light work load, the advisor and his assistants devoted much time to improving the skill of the VNAF personnel in handling DASC operations.^{4/}

In some respects, I DASC resembled a combination TACC/TADC/DASC. I DASC had the authority to scramble VNAF fighters directly from the

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Da Nang pads and it frequently communicated with the 41st Wing. I DASC had direct communications with the VNAF component of Panama CRC, and had the authority to direct VNAF air to meet emergency requirements. It also had responsibility for managing the I Corps helicopter resources, but eliminated much of the work load this entailed by allocating the helicopters to the ground commanders on a day-to-day basis and letting the ground commanders move them about as they wished.^{5/}

The Vietnamese tactical air control used by I DASC in support of ARVN operations in I Corps was basically the same as the MACV Joint Air-Ground Operations System (JAGOS). The major exceptions were that the Corps DASCs had more local autonomy and were linked with VNAF wings assigned to the Corps and flying almost exclusively in support of operations in that Corps area. Preplanned requests were supposed to filter up through the ARVN ground command chain, until they reached the ARVN TASE where the requests were passed to the VNAF side of the TACC. In I Corps, however, the TOC passed its requests for air to I DASC which then told the TACC what sort of frag it wanted sent down to fit in with the 41st Wing's schedule. I DASC then went back to the wing and the VNAF TACPs with the approved frag.^{6/}

The add-on system was supposed to work through the same request process as the preplans, but its use was discouraged by the VNAF DASC Director as being too unwieldy and time consuming. Instead he recommended that the VNAF immediate system be used. In this system, requests for

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immediate air support were forwarded to the DASC and I Corps TOC simultaneously, where they were coordinated and political clearances with the provincial authorities were checked. At the DASC, the decision would be made to go with Vietnamese air or to ask for FWMAF support.^{7/} An attempt was made to match Vietnamese FACs and fighters with ARVN ground units, but time was the overriding factor in any TIC situation. FWMAF fighters could only work under control of U.S. FACs, but U.S. ARVN FACs could control any fighters. Thus, in an immediate situation, the nationalities of the FACs and fighter pilots had to be considered along with the ordinary considerations of time and ordnance. Requests for immediate air support generated by U.S. ARVN FACs went from the Division TACP to Horn DASC with Horn DASC verifying the political clearance with I Corps G-3.^{8/}

Summary

While the 41st Wing was working toward becoming operational in the A-37, I DASC was building its capacity to respond with more effective air support by upgrading the capabilities of the VNAF TACPs with the major I Corps ARVN units. One problem area was the uncertain status of the QDSZ TACP which struggled to establish an independent position in the Da Nang area. With I DASC, Panama CRC, and the 41st Wing all in daily contact with each other, there was a distinct tendency to ignore the QDSZ TACP and its little FM radio. A related problem was the 41st Wing's policy of sending FACs to the TACP for only ten days at a time, while keeping a FAC pool in reserve at Da Nang. This tended to concentrate

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control of air assets in the hands of the VNAF 41st Wing at Da Nang, and made it much more difficult for the VNAF FACs to get to know any particular AO very well. ^{9/}

By the summer of 1969, the shock of separating I DASC into virtually independent systems had worn off and no unusual problems had developed. Some good practice was picked up in June and July as the 41st Wing began to fly armed training missions. In order to exercise the entire system, these sorties were fragged and flown as operational missions even though the status was technically that of training. The VNAF DASC Director was having some problems with ARVN ground commanders, who believed they had absolute control of any air resources entering their AO, but any USMC DASC Director could have described a very similar situation. ^{10/}

In retrospect, the VNAF I DASC appeared to have combined some of the best features, along with more impractical characteristics, of the USAF ~~and USMC direct air support systems.~~ ^{Tactical Air Control Systems.} The assignment of corps-wide responsibility to the 41st Wing appeared to be working well. I DASC controlled the frag and managed the tactical air resource for the I Corps commander, enabling members of the Wing to develop a sense of responsibility toward the people in I Corps. The upgrading of the division TACPs held the promise that the TACPs would provide a strong subsystem to back up the nucleus of trained and experienced Vietnamese personnel at I DASC. I DASC itself was in a position to run an almost independent operation. Although there were areas where communication and coordination problems

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could occur, these problem areas were less significant than the fact that in I Corps there was a Vietnamese DASC capable of getting VNAF tactical air support for Vietnamese FACs working with Vietnamese Army units.

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CHAPTER VIII

EPILOGUE - THE BARKY FACS, JUNE 1969

One place where all the command and control systems were influential was the cockpit of an OV-10 flown by a FAC of the 1st Brigade of the 5th Mechanized Infantry Division (1/5 Mech) TACP. The 1/5 Mech TACP, known as Barky Control, worked out of Quang Tri Marine Air Base, 12 miles south of the DMZ along the SVN coastal plain. The 1/5 Mech was under operational control of the 3 MARDIV, which was a subordinate unit of the XXIV Corps in I CTZ. The normal area of operation for the 1/5 Mech was around Quang Tri from the southern border of the 1st ARVN AO on the DMZ, 30 miles down the coast and roughly 30 miles inland. In addition, elements of the 1/5 Mech were assigned to Task Force Hotel and were deployed in an AO 30 miles south of the DMZ along the Laotian border.^{1/}

Although primarily concerned with supporting the 1/5 Mech, the Barky FACs roamed the entire northern rim of I Corps and could be called upon by either of the two Marine DASCs, Vandergriff or Dong Ha, to help any unit in the 3 MARDIV area of responsibility. On any given day, they might be asked to provide close air support, adjust artillery, or perform special visual reconnaissance for a 1/5 Mech unit, Marine battalion, ARVN company, SOG team of a Marine Recon platoon. However, Barky's primary job was support of the 1/5 Mech since there were also USAF ARVN FACs, USMC FACs, and U.S. Army FACs with Marine airborne observers working in the same area.^{2/}

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The agencies that tied this system together were the two Marine DASCs and DASC Victor. These sub-DASCs were able to mix their allotted resources to suit the requirements of the tactical situation. In a true emergency situation, they could usually get fighters to a FAC in northern I Corps within 20-30 minutes or less.^{3/}

The primary liaison between the Barkys and the 1/5 Mech took place between the FACs and the company commanders in the field. When the FAC came overhead, he discussed the situation with the ground unit commander and together they decided how preplanned or immediate close air support air might be used that day. The only pre-briefing the FAC felt he needed was his own knowledge of the situation from his work the day before and word-of-mouth information from the other Barky FACs. After consulting with the ground commander, the FAC summed up the type of air support he thought would be most productive for the two hours he would be working in the AO. If an area of suspected enemy activity produced a target, then the FAC would ask the ground commander and the appropriate DASC to clear the "grid square". If the square were outside the ground commander's AO, the DASC agencies would check with the other responsible agencies and report back to the FAC.^{4/} This process usually took about five minutes, but under certain combat conditions, it could require up to several hours. Once the target had been cleared, and if there were no preplans scheduled for that particular unit, the FAC would inform the DASC that he would accept any diverted air that became available. Of, if he felt the target was important enough, he could request a scramble. Occasionally, minor

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difficulties arose when two FACs from different services were working on a joint operation in the same general area. Under these conditions, if the targets were considered of equal value, the DASC had to decide who would get the air support. Occasionally, this decision was based on local interests as much as it was on target value.^{5/}

However, when there were troops in contact or enemy forces in the open, there was very rarely any problem getting the necessary air support or ground clearance. As soon as the DASC got the call from the FAC, it began to work on getting fighters to the area as quickly as possible. The FAC, having been in contact with the ground commander, knew the situation and ordered the fighter support he felt was appropriate to the situation. The DASC continued to monitor the action and, if the fighters were being used well and the need for air still existed, it continued to feed sorties to the FAC without being asked. The most important sortie was the first one on the target, and the DASC went to the CAP, scrambled off the Marine pad or worked through DASC Victor for Air Force assistance to get the most available air. If the contact looked significant, occasionally all three channels were used simultaneously. In these situations, the Dong Ha/Vandergriff system was quite flexible and had the capability of handling multiple TIC situations.^{6/}

One problem that arose in a TIC situation was that of coordinated fires. The man on the ground had final authority over the type of support he would accept, but often pressures were imposed upon him to use artillery even when air was available. Frustrations occurred in artillery,

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because it was continually forced to check fire whenever there were aircraft nearby. With only a few sets of fighters, the artillery support was sometimes rendered unusable for upward of an hour. Adding that time to the amount needed to register and adjust the fire, it was quite natural for those accustomed to artillery in its traditional role to become concerned with its ability to perform in a heavy air support environment. In addition, FACs were not overly anxious to get involved with artillery adjustment, because they believed it took artillery too long to respond in a fluid situation, and that it had limited effectiveness. Procedures for coordinated fire using artillery before, during, and after airstrikes did exist, but in practice were not frequently exercised. With all the tasks the FAC had to perform, he was hard pressed to work this type of close coordination without an observer in the aircraft to assist him. The Marines used this two-man concept, and it appeared to offer possibilities for a better integrated air-ground effort when events were happening very rapidly.^{7/}

The Barky FACs were involved in virtually every facet of the close support of ground forces. They controlled everything from USAF F-4s and F-100s to Army O-1s and helicopter gunships. They were called on to support U.S. Army, USMC, or ARVN units in concentrations as large as a battalion or as small as a Recon Team, and to do so with ordnance ranging from 3,000-pound bombs to mortars, artillery, and Naval gunfire. A mission flown by Captain C. R. Merkle on 27 June 1969 illustrates quite well the cooperation and coordination occurring continuously in northern I Corps.

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At 0605 hours, two companies of NVA initiated an attack on a 1/5 Mech Command Post in the Route 9/Laotian border area (XD8235). The light conditions were poor; there was a 1,000-foot ceiling and low scud in the area. Captain Merkle was airborne at 0645 hours and was sent to the area by Vandergriff DASC, where he was briefed by Seaworthy 97-1 (USMC 0-1 FAC) and the ground commander. At 0715 hours, two Marine F-4s scrambled by the Seaworthy FAC were on station and Captain Merkle had them work outside the CP perimeter. This broke the impetus of the attack. By 0745 hours, two USMC UH-1 gunships had arrived and they continued to maintain pressure on the attackers. Fifteen minutes later, Seaworthy 98, an armed Marine OV-10 appeared and helped drive the NVA down the hill from the command post area.^{8/} When the OV-10 departed the area, Captain Merkle directed artillery for about 30 minutes while a reaction force from the CP attempted to work around to a blocking position. At 0842 hours and 0907 hours, two more flights of Marine F-4s (Lovebug 160 and Lovebug 204) were diverted to Captain Merkle. He used these flights to pin down and destroy the retreating NVA. Finally, at 0930 hours, the enemy withdrew leaving behind 22 NVA KIA, one PW, 19 AK-47s, and a Russian radio. Captain Merkle received no particular recognition for this action. For the Barky FACs,^{9/} this was considered to be just another example of a very good day's work.

The Barkys had to depend upon elements of all services to be able to perform their job effectively and their results were proportional to their ability to win the support and trust of the people they worked with. The high esteem the Barkys held in northern I Corps was proof of their success.

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CHAPTER IX

CONCLUSION

The I Corps DASC system was the product of the union of the USAF and USMC tactical air control systems. Although there were problems encountered in the new system, Marine and Air Force elements soon learned to work well together. The result was an air request system that had outstanding flexibility and responsiveness. The system worked well, in spite of a potentially explosive command situation, because each echelon of command placed the welfare of the individual soldier far ahead of parochial interests.

Although there were occasional attempts by Marine ground commanders to go outside the system, the Director of Horn DASC always knew that he could establish tight control when required and that III MAF would accept his total control of I Corps tactical air assets.

The keystone of the I Corps ^{Tactical Air Control system} ~~direct air support system~~ was Horn DASC. In one way or another, all combat units in I Corps had access to Horn DASC and the services it provided. The DASC Director was the senior representative of the 7AF TACC in I Corps. He was the Chief USAF Air Liaison Officer to III MAF and the 1 MAW, the Senior Air Advisor to I Corps, and the Deputy Director of I DASC (VNAF). Through the staff at DASC Victor and all the I CTZ ALOs and FACs, Horn DASC had access to all U.S. Army divisions and brigades, all ARVN units, and all Vietnamese provincial forces. Finally, Horn DASC had primary responsibility for

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the effective utilization of all FVMAF tactical air assets in I Corps, which included USAF, USMC, USN, and RAAF fighters and the in-country assets of the 20th TASS.

Horn DASC was the guardian of the Single Manager Concept for the Commander, Seventh Air Force. Only in I Corps was the system challenged and only in I Corps did implementation of the system significantly alter the traditional methods of operation of subordinate units. The Single Manager Concept would stand or fall on its ability to succeed in I Corps. The fact that the system worked, and worked well, was proof of the soundness of the Single Manager Concept, and a tribute to the dedication of all those who strove to insure the concept was given a fair trial.

Tactical Air Control system
The ~~direct air support system~~ in I Corps followed the general concepts outlined in AFM 2-7; however, Horn DASC possessed the authority to scramble fighters without going through the TACC and was divorced from any airlift responsibility. Because of communications problems and habitual methods of operation, brigade TACPs rarely communicated with the DASCs for immediate requests. This function was reserved at the division level, where the division TACP copied the necessary information from the TACP or FAC, and then relayed the request to the DASC through land lines.

Although the director of Horn DASC had a good working relationship with the 20th TASS, he did not control its activities except for the day-to-day operations of the ALO/FACs. As a result, the director of Horn DASC was deprived of the direct control over the resources he needed to effectively conduct his mission and the ALOs and FACs found themselves responsible to two or more agencies. One solution, for I Corps, would

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have been to place the TASS under the direct control of the DASC Director and have all support provided by the 366th Wing at Da Nang as the host organization; thereby, providing the DASC Director with a single point of contact for all FAC resources.^{1/}

Although the faulty data base for I Corps could be used to substantiate their claim, the personnel at Horn DASC believed they had the most responsive ~~direct air support system~~ ^{Tactical Air Control System} in SVN. With an average of 40 percent of the daily in-country tactical air being used in I Corps, this belief was undoubtedly justified, since this quantity of air provided a continual, four-sortie air CAP over I Corps.

The ground forces' practice of scheduling preplanned air throughout the day, combined with the Marine airborne alert, insured that there would be some tactical air available in I Corps at all times. There was one area where responsiveness could have been improved with better communications facilities. A five-minute delay in relaying requests from northern I Corps to Horn DASC was created by different agencies having to copy and then retransmit requests. This procedure added time to the request process and increased the possibility of error. Had it been possible to implement the classical system whereby intervening echelons of command only monitored immediate requests and acquiesced by silence, this delay factor could have been significantly reduced.

Other ways that substantial improvements in AF response times could have been achieved were to: (1) reduce ground times for scrambled aircraft;

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(2) scramble aircraft before political clearances were received; or
(3) go to a modified Air Force airborne alert to supplement the Marines airborne alert. Ground times for scrambles averaged about 15 minutes. At Da Nang, substantial savings in time could have been achieved by having the AF ground alert fighters in a "cocked" condition in revetments at the end of the runway. Scrambling fighters on the FAC's initial request would have cut the delay engendered by the ground clearance requirement. Given the large number of targets available in I Corps, the occasional strike that was not cleared could always be used against other pre-cleared, non-time-sensitive targets in the area. A modified airborne alert would have required the fighters fraggged against non-time-sensitive targets to go into a CAP orbit for as long as possible before going in on the fraggged target. The non-time-sensitive target that was not struck, because of a diverted CAP sortie, could then be picked up by an add-on sortie or resubmitted for the next day's activity. Ordnance loads might have created occasional difficulty, but in a true TIC emergency, the ground commanders would have been more than willing to accept any available tactical air support. If these procedures were instituted, I Corps' average response times to TIC requests could have been well within 20 minutes from the receipt of the request to rendezvous with the FAC. Given the 30-minute average of immediate response times in 1968, the savings in response time created by these changes in procedure might not have been worth the additional effort.

This study has only touched on the many facets of the air war in

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I Corps, SVN. By the nature of its diversity and challenge, I Corps may well be the laboratory from which the integrated tactical air control systems of the future emerge. Further study and comparison of the I Corps ^{tactical} ~~direct~~ air control system may well yield significant savings in time and effort in tomorrow's tactical air war.

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CHAPTER IX

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GLOSSARY

AA	Antiaircraft
AAA	Antiaircraft Artillery
ABCCC	Airborne Battlefield Command and Control Center
ABN	Airborne
AD	Air Division
ADVON	Advance Echelon
AFM	Air Force Manual
ALO	Air Liaison Officer
AO	Area of Operation
AOR	Area of Responsibility
ARVN	Army of the Republic of Vietnam
ASAP	As Soon As Possible
ASOC	Air Support Operations Center
ASRT	Air Support Radar Team
ATRC	Air Traffic Regulation Center
BDA	Bomb Damage Assessment
Bde	Brigade
Bn	Battalion
CAP	Combat Air Patrol
CAS	Close Air Support
Cav	Cavalry
CG	Commanding General
COMUSMACV	Commander, U.S. Military Assistance Command, Vietnam
CP	Command Post
CRC	Combat Reporting Center; Control and Reporting Center
CRP	Control and Reporting Post
CSS	COMBAT SKYSPOT
CTZ	Corps Tactical Zone
DASC	Direct Air Support Center
DMZ	Demilitarized Zone
DSDT	DASC Decision Time
FAC	Forward Air Controller
FFV	Field Force Vietnam
FM	Frequency Modulation
FOL	Forward Operating Location
FSCC	Fire Support Coordination Center
FSCL	Fire Support Coordination Line
FWMAF	Free World Military Assistance Force
JAGOS	Joint Air-Ground Operations System

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KBA	Killed by Air
KIA	Killed in Action
LZ	Landing Zone
LOC	Line of Communication
MACV	Military Assistance Command, Vietnam
MAF	Marine Amphibious Force
MARDIV	Marine Division
MAW	Marine Air Wing
MEB	Marine Expeditionary Brigade
Mech	Mechanized
NBL	No Bomb Line
NGF	Naval Gunfire
NVA	North Vietnamese Army
OpCon	Operational Control
OpOrd	Operations Order
OPlan	Operations Plan
PACAF	Pacific Air Forces
PCV	Provisional Corps Vietnam
PF	Popular Force
PW	Prisoner of War
QDSZ	Quang Da Special Zone
RAAF	Royal Australian Air Force
Recon	Reconnaissance
RF	Regional Force
ROK	Republic of Korea
RP	Route Package
RVN	Republic of Vietnam
SAR	Search and Rescue
SCAR	Strike Control and Reconnaissance
SEA	Southeast Asia
SEAITACS	Southeast Asia Integrated Tactical Air Control System
SMA	Single Manager for Air
SOG	Studies and Observation Group
SSZ	Specified Strike Zone
SVN	South Vietnam
TACAN	Tactical Air Navigation
TACC	Tactical Air Control Center
TACP	Tactical Air Control Party
TACS	Tactical Air Control System

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TADC	Tactical Air Direction Center
TAOC	Tactical Air Operations Center
TARC	Tactical Air Request Center
TASE	Tactical Air Support Element
TASS	Tactical Air Support System
TFW	Tactical Fighter Wing
TIC	Troops in Contact
TOC	Tactical Operations Center
TOT	Time Over Target
TUOC	Tactical Unit Operations Center
UFO	Unidentified Flying Object
USA	United States Army
USMC	United States Marine Corps
USN	United States Navy
VC	Viet Cong
VNAF	Vietnamese Air Force
VR	Visual Reconnaissance